

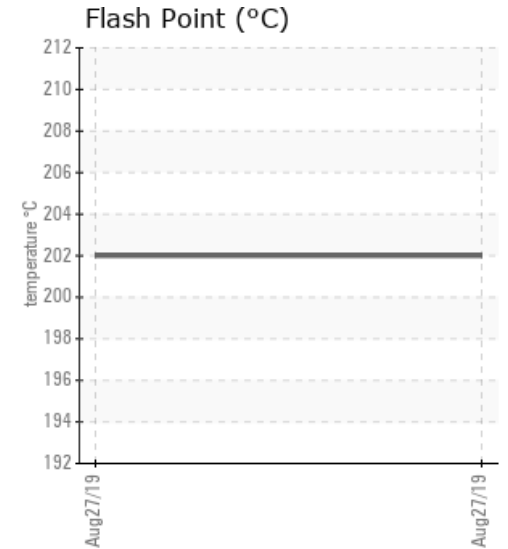
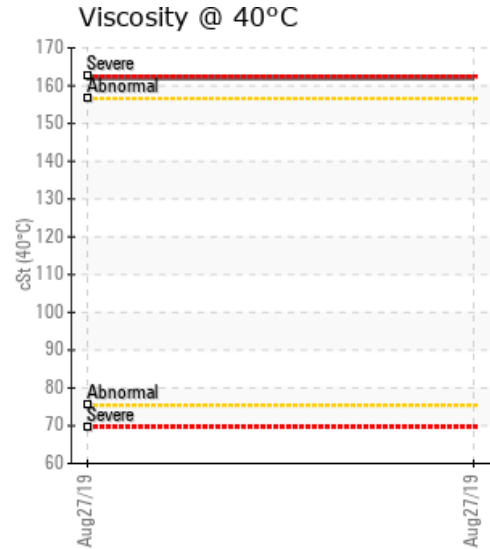
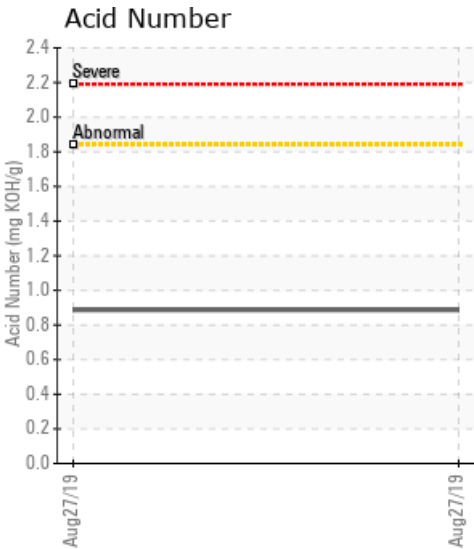
MONTREAL

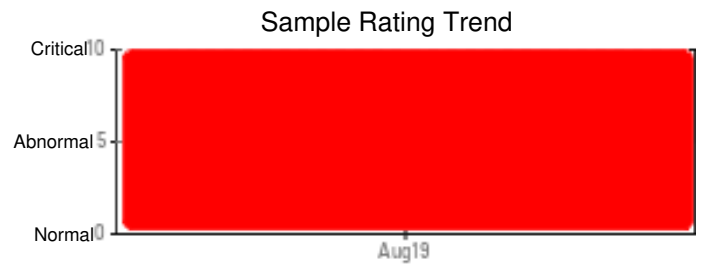
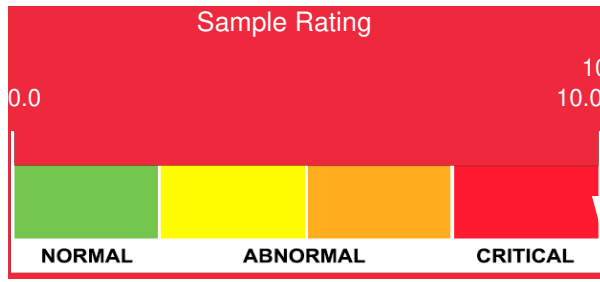
Customer: PTRHTF30139	System Information	Sample Information
McAsphalt Industries Ltd. 11451 Sherbrooke Est Montreal Est, QC H1B 1C2 Canada Attn: Sylvain Provencher Tel: (514)645-1691 E-Mail: sprovencher@mcasphalt.com	System Volume: 5740 ltr Bulk Operating Temp: 375F / 191C Heating Source: Blanket: Fluid: N/A Make: HEATEC	Lab No: 02305295 Analyst: Behshad Sabah Sample Date: 08/27/19 Received Date: 08/28/19 Completed: 09/03/19

Recommendation: High Pentane Insoluble, TAN and oil viscosity all indicate the sever oil oxidation and degradation. High PPM of Iron indicates the corrosion of the piping. these is a chance of pinholes and product leak to the environment. need to change the oil

Comments: Iron ppm levels are severe. PQ levels are severe. Pentane Insolubles levels are severely high. Sodium ppm levels are severely high. COC Flash Point is severely high. Visc @ 40°C is abnormally high.

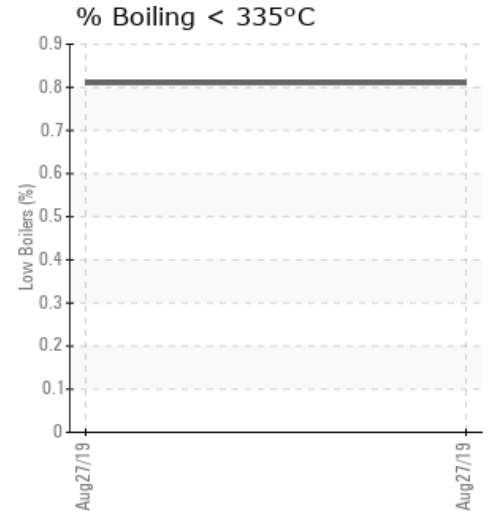
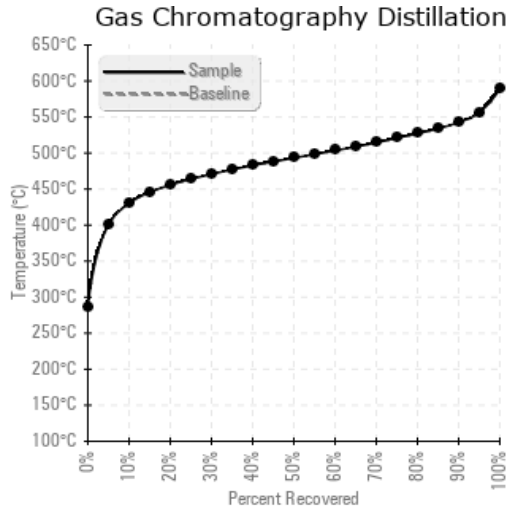
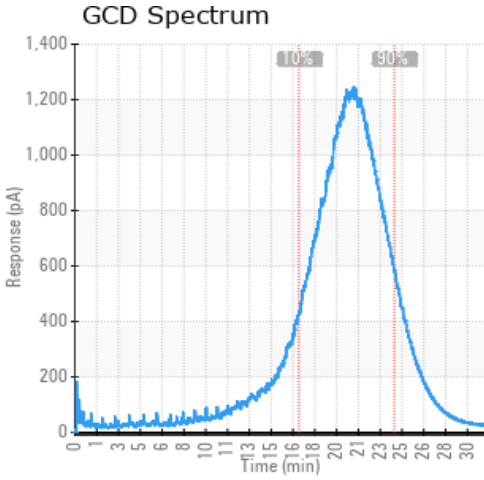
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
08/27/19	08/28/19	0k		396 / 202	113.4	162	0.887	5.16	807 / 431	920 / 493	1009 / 543	0.81
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
08/27/19	1149	3	0	0	1	2	0	0	0	0	3	58	0	0	0	0	10	0	2	0	11	0	14	3
Baseline Data													0					0					0	

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



Historical Comments

Petro-Canada makes no representation or warranty of any kind, either express or implied, as to the accuracy or completeness of the analysis and assumes no responsibility and shall have no liability whatsoever with respect to such analysis, or a party's use of it. Petro-Canada is a division of HollyFrontier Corporation.