

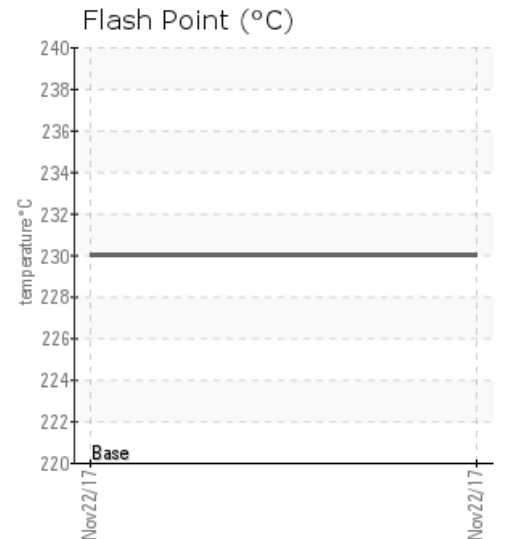
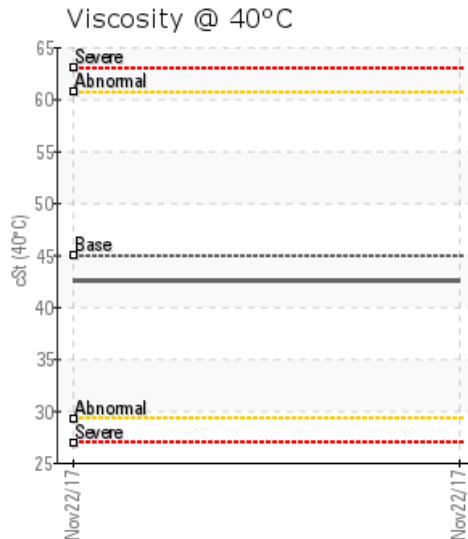
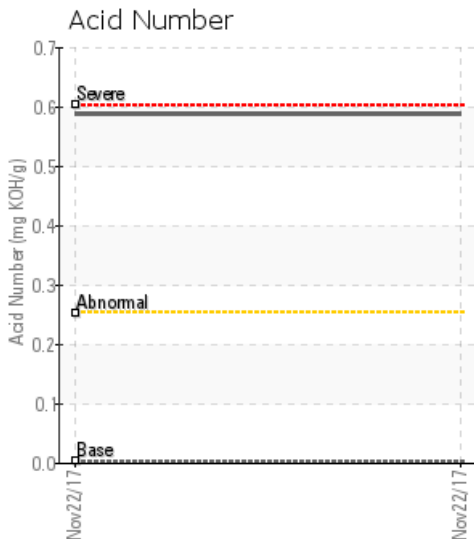
RELIABLE PULASKI

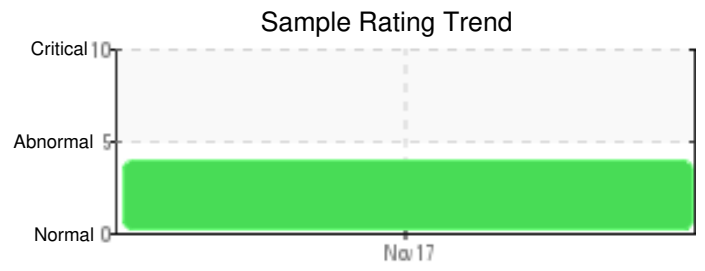
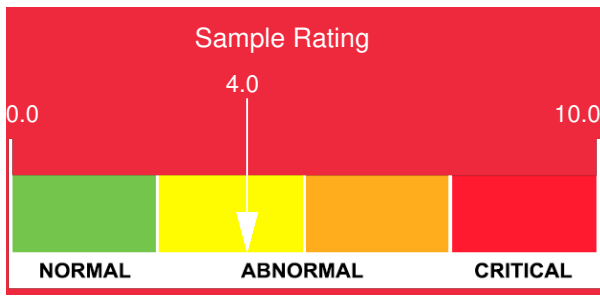
Customer: PTRHTF30109	System Information	Sample Information
RELIABLE MATERIALS LLC 5500 S PULASKI CHICAGO, IL 60629 USA Attn: Bob Madden Tel: (630)774-4120 E-Mail: rmadden@biganepaving.com	System Volume: 550 gal Bulk Operating Temp: 330F / 166C Heating Source: Blanket: Fluid: PARATHERM HE Make:	Lab No: 02185910 Analyst: Yvette Trzcinski Sample Date: 11/22/17 Received Date: 12/05/17 Completed: 12/21/17 To discuss this report contact Yvette Trzcinski at (262)933-0718

Recommendation: Acid number is very high which is an indication that the oil is oxidized. The solids are also very high 0.5% is the warning limit and this sample is at 0.587%. Appears the oil is oxidized, and has sludge, and organic and inorganic solids that have the ability to have plated out and fouled the system. Recommend that the current fluid be changed and the system be cleaned and flushed. It is important to remove any sludge, deposit and oxidized oil completely from the system to ensure it does not contaminate the new oil.

Comments: Pentane Insolubles levels are abnormally high. (GCD) 90% Distillation Point is severely low. Acid Number (AN) is abnormally high.

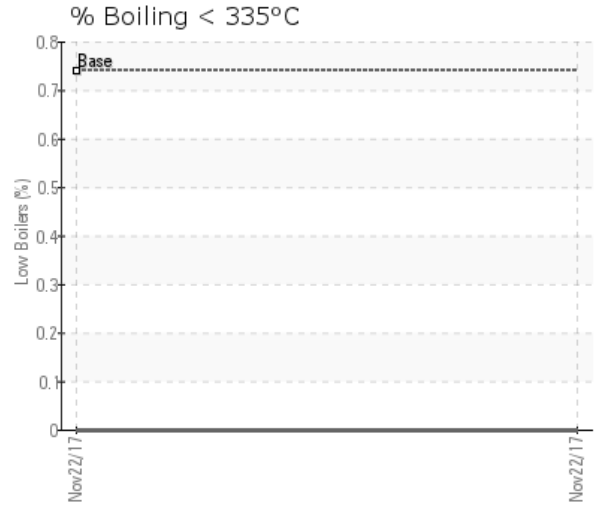
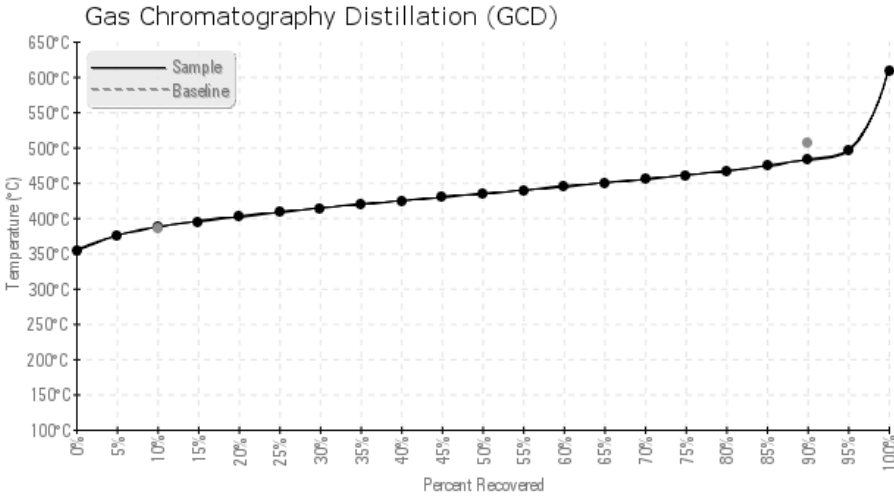
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
11/22/17	12/05/17	0y	SAMPLE PORT	446 / 230	36.7	42.5	0.587	0.434	728 / 387	814 / 434	901 / 483	0.00
Baseline Data				410 / 210		45	0.004		725 / 385		945 / 507	0.74





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
11/22/17	5	0	0	1	1	0	0	11	0	0	5	0	0	0	0	0	0	0	0	4	11	0	0	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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