

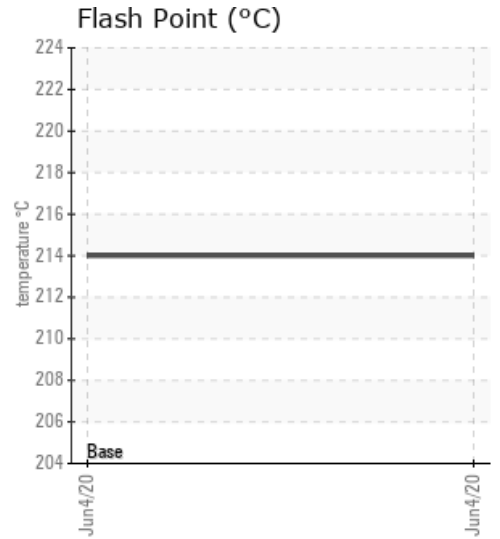
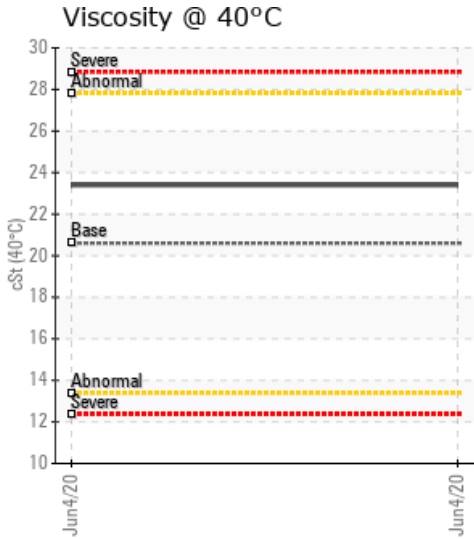
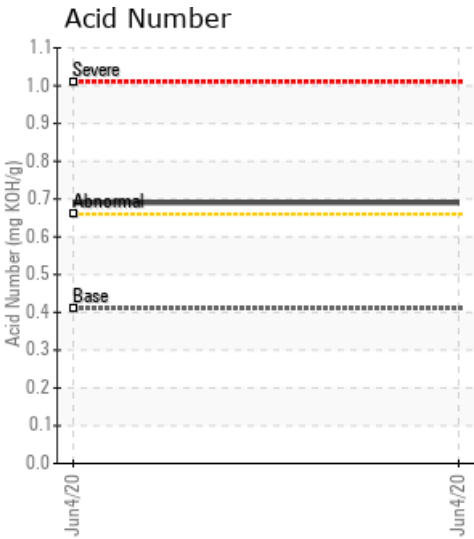
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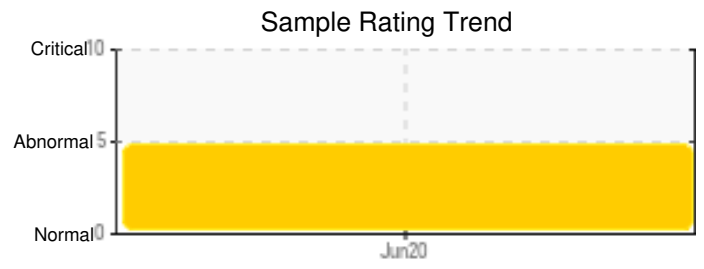
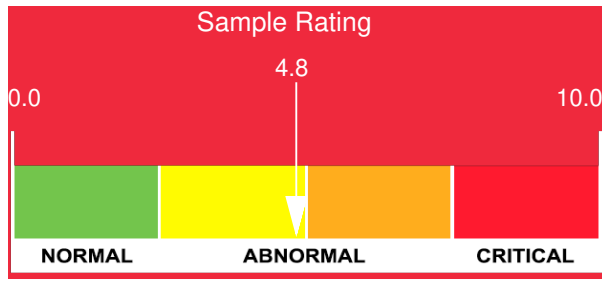
Customer: PTRHTF10220	System Information	Sample Information
OMG MIDWEST/DES MOINES ASPHALT AND ... 5109 NW BEAVER DR JOHNSTON, IA 50131 USA Attn: Neil Buchanan Tel: (515)231-3035 E-Mail:	System Volume: 150 gal Bulk Operating Temp: 752F / 400C Heating Source: Blanket: Fluid: HEAT TRANSFER FLUID ISO 22 Make: ASTEC	Lab No: 02359627 Analyst: Neil Buchanan Sample Date: 06/04/20 Received Date: 06/16/20 Completed: 06/22/20 Neil Buchanan neil.buchanan@petrocanadalsp.com

Recommendation: Brand of current ISO 22 heat transfer fluid is unknown. Acid Number (AN) is high as is the GCD 10% boiling point which indicates the fluid is oxidizing. Pentane Insolubles are rising at 0.128% but below the condemning limit of >0.5%. Resample next interval to monitor.

Comments: (GCD) 10% Distillation Point is severely high. Acid Number (AN) is abnormally high. COC Flash Point is marginally high. (GCD) 50% Distillation Point is marginally high.

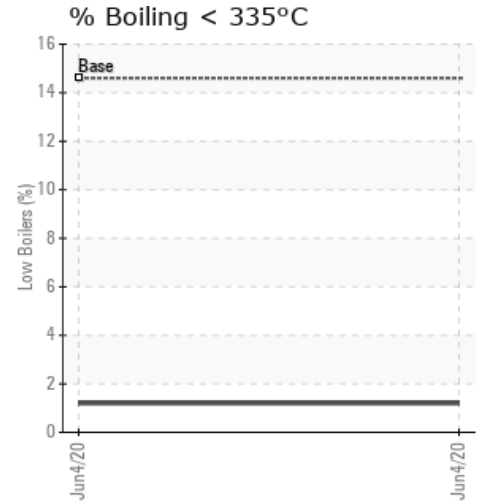
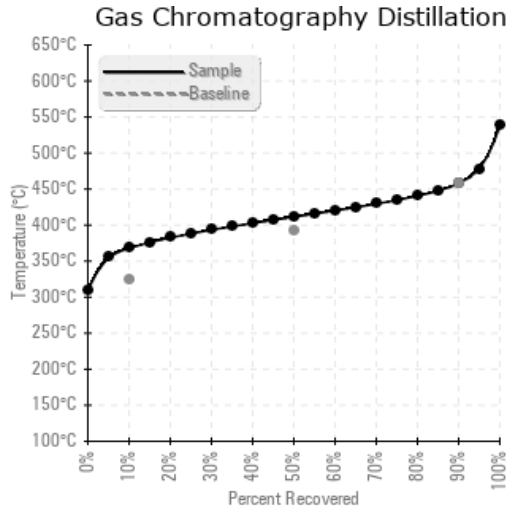
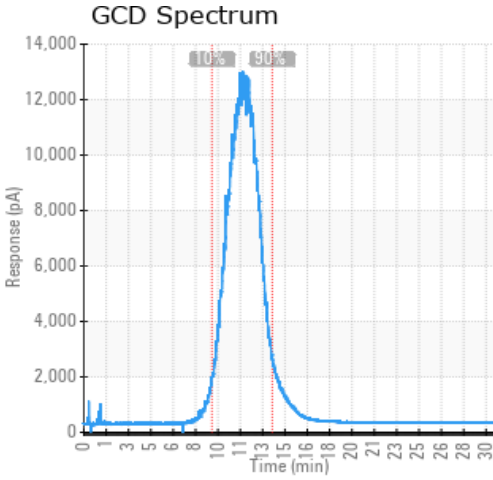
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
06/04/20	06/16/20	0h	CIRCULATION	417 / 214	152.9	23.4	0.69	0.128	694 / 368	773 / 411	856 / 458	1.20
Baseline Data				354 / 179		20.6	0.41		617 / 325	739 / 393	856 / 458	14.6





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
06/04/20	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Baseline Data			0	0						0			0	0					5				250	

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



Historical Comments

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