

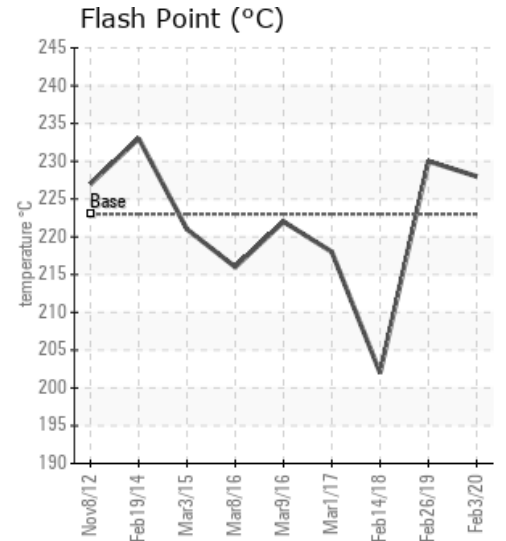
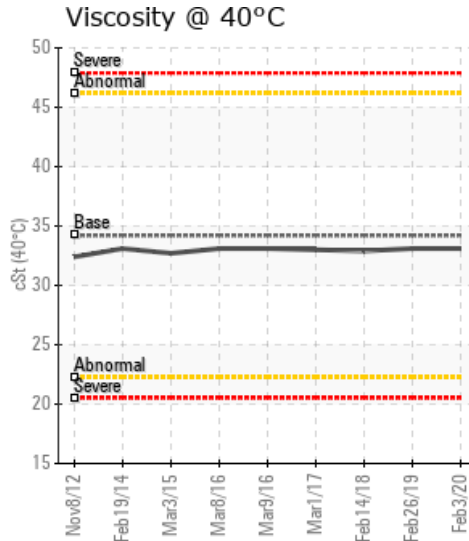
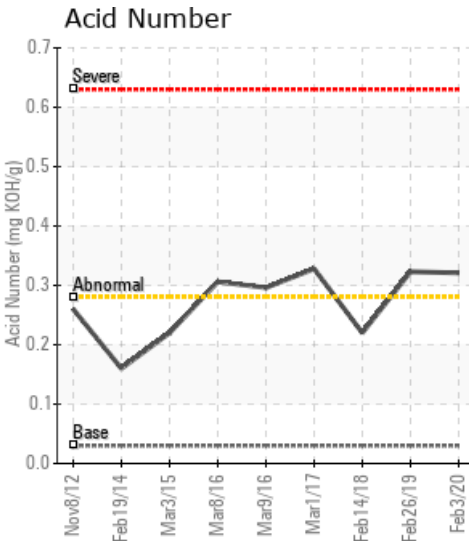
LOWER TANK FARM

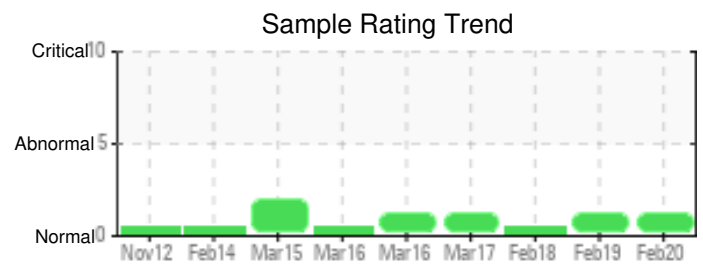
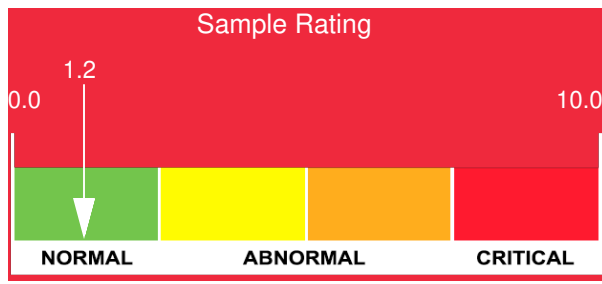
Customer: PTRHTF10125	System Information	Sample Information
TRANSMONTAIGNE 700 RIVER ROAD COVINGTON, KY 41017 USA Attn: Dwayne Gray Tel: (859)331-0900 E-Mail: dgray@transmontaigne.com	System Volume: 2500 gal Bulk Operating Temp: 300F / 149C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: AMERICAN HEATING	Lab No: 02342315 Analyst: Joe Goecke Sample Date: 02/03/20 Received Date: 03/09/20 Completed: 03/24/20 Joe Goecke Joe.goecke@petrocanadalsp.com

Recommendation: Product looks very good. Minimal acid build up with all other numbers in line. Continue to use and resample at next scheduled interval.

Comments: Acid Number (AN) is abnormally high.

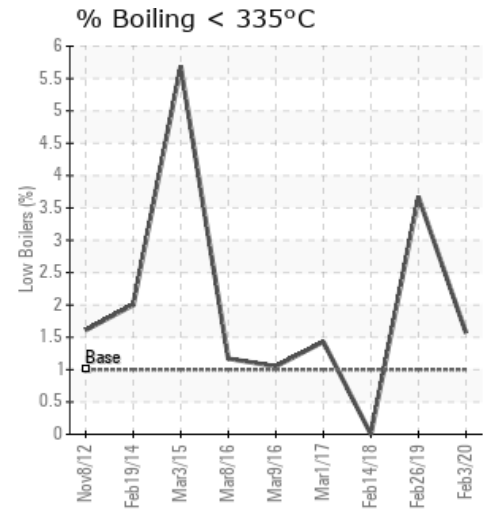
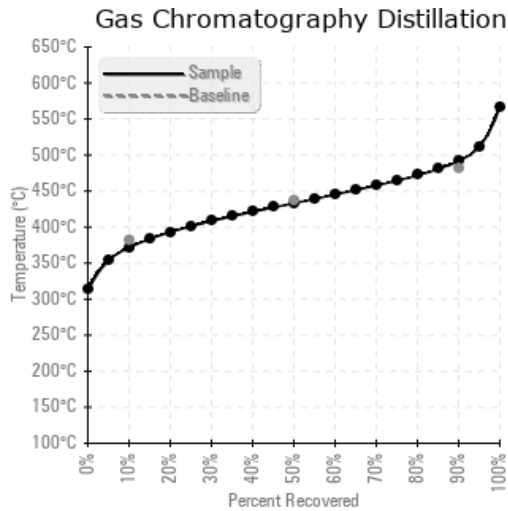
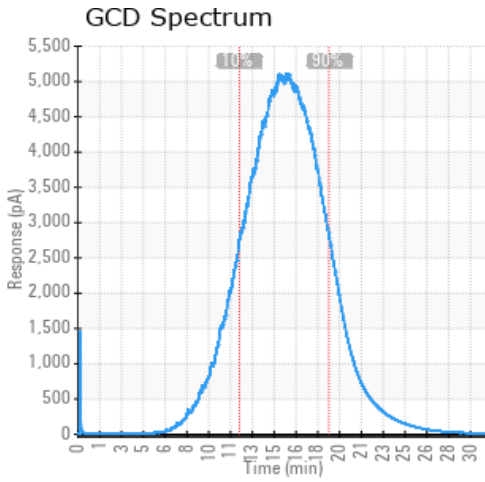
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
02/03/20	03/09/20	7y	BOOSTEN PUMP	442 / 228	0.00	33.1	0.321	0.077	701 / 372	812 / 433	917 / 492	1.57
02/26/19	02/27/19	6y	BOOSTER PUMP	446 / 230	0.5	33.1	0.323	0.059	674 / 357	775 / 413	882 / 472	3.67
02/14/18	02/15/18	6y		396 / 202	0.00	32.9	0.22	0.028	721 / 383	806 / 430	904 / 485	0.00
03/01/17	03/13/17	5y	BOOSTER PUMP	424 / 218	10.1	33.0	0.328	0.050	699 / 370	798 / 426	913 / 489	1.43
03/09/16	03/16/16	8760y	BOOSTER PUMP	432 / 222	0.00	33.1	0.296	0.077	699 / 370	798 / 425	915 / 491	1.05
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
02/03/20	4	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	226	0
02/26/19	3	0	0	0	0	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	2	0	208	0
02/14/18	2	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	1	0	228	0
03/01/17	3	0	0	0	0	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0	234	0
03/09/16	3	0	0	0	0	0	0	0	0	0	3	4	0	0	0	0	0	0	0	0	0	0	237	0
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

02/26/19	Flash point, low boilers and viscosity all look great. No issues with oil, continue to use and resample at next scheduled interval. Acid Number (AN) is abnormally high.
02/14/18	Acid number slightly high but lower than previous. Continue to use and resample at next scheduled interval.
03/01/17	Acid number is slightly high but all other parameters look normal. Continue to monitor and use with resample at next scheduled interval. Acid Number (AN) is abnormally high.
03/09/16	Oil is in good condition. Acid number is starting to increase which is a sign of oxidation but is not an issue at this time. Please resample at the next maintenance interval. Acid Number (AN) is abnormally high.

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