

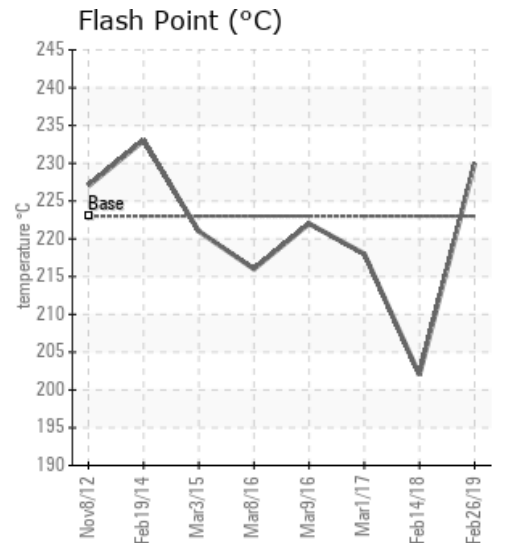
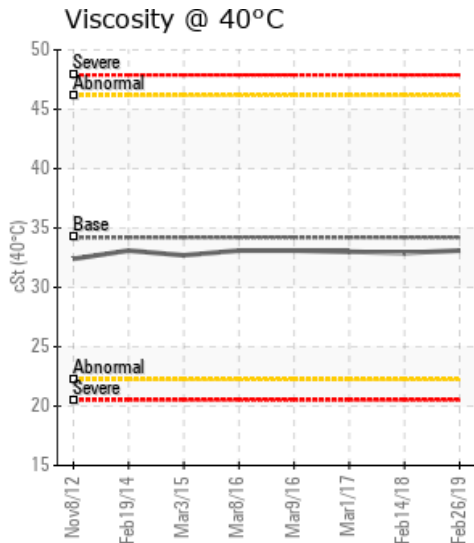
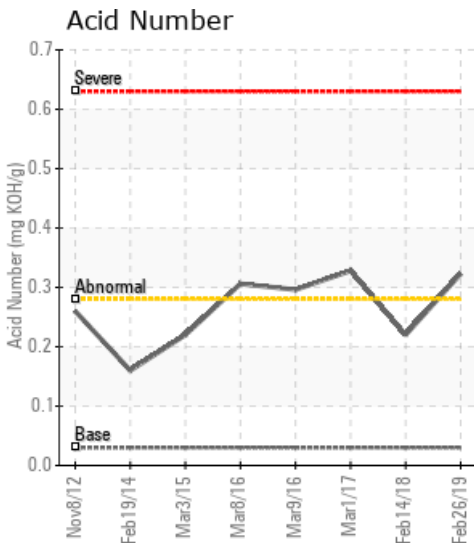
## LOWER TANK FARM

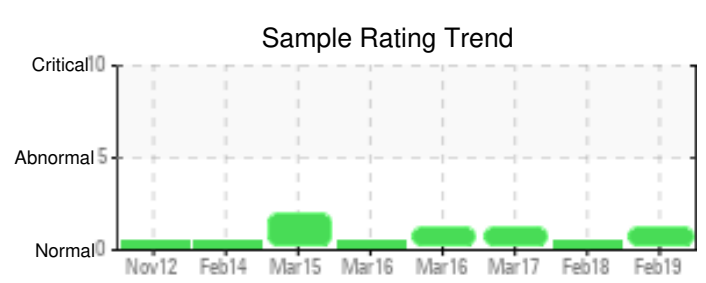
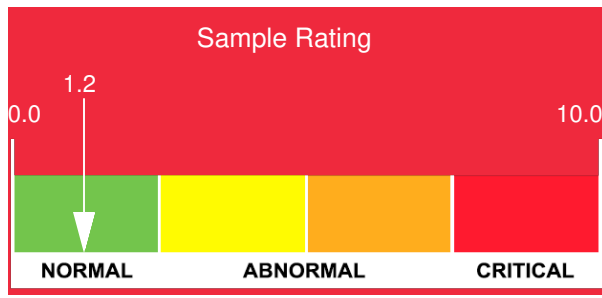
Customer: PTRHTF10125	System Information	Sample Information
<b>TRANSMONTAIGNE</b> 700 RIVER ROAD COVINGTON, KY 41017 USA Attn: Dwyane Gray Tel: (859)331-0900 E-Mail: dgray@transmontaigne.com	System Volume: 2500 gal Bulk Operating Temp: 300F / 149C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: AMERICAN HEATING	Lab No: 02270307 Analyst: Joe Goecke Sample Date: 02/26/19 Received Date: 02/27/19 Completed: 03/05/19

Recommendation: Flash point, low boilers and viscosity all look great. No issues with oil, continue to use and resample at next scheduled interval.

Comments: Acid Number (AN) is abnormally high.

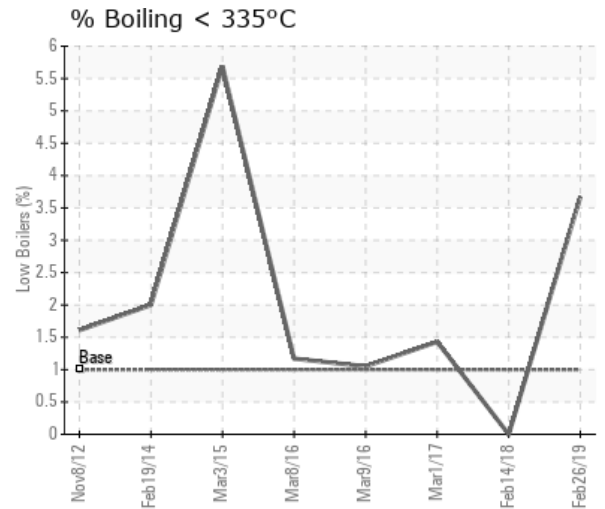
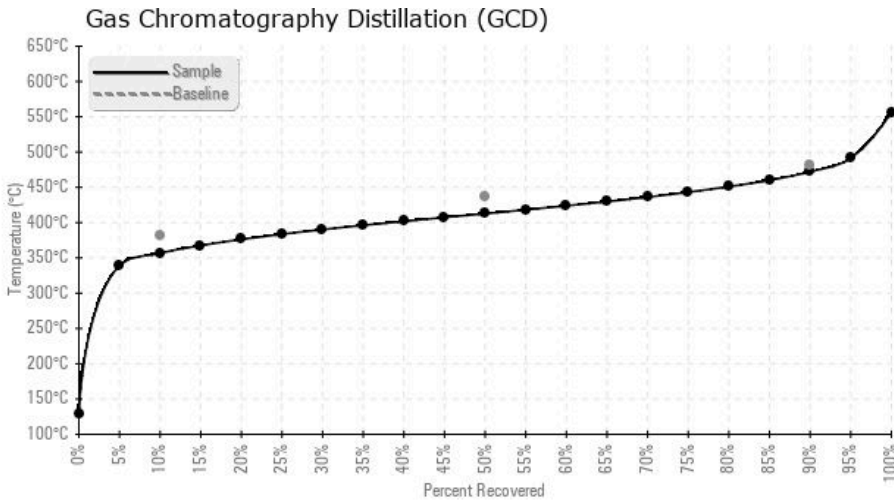
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
02/26/19	02/27/19	6y	BOOSTER PUMP	446 / 230	0.5	33.1	0.323	0.059	674 / 357	775 / 413	882 / 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
03/08/16	03/16/16	8760y	BOOSTER PUMP	421 / 216	0.00	33.1	0.306	0.059	698 / 370	796 / 425	909 / 487	1.17
03/03/15	03/20/15	8760y	LOWER TAND FORM	430 / 221	0.7	32.7	0.22	0.139	666 / 352	796 / 424	938 / 503	5.69
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
02/26/19	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
03/08/16	3	0	0	0	0	0	0	0	0	0	3	4	0	0	0	0	0	0	0	0	1	0	246	0
03/03/15	4	0	0	0	0	0	0	0	0	0	4	7	0	0	0	0	0	0	0	0	3	0	237	1
<b>Baseline Data</b>			0	0						0			0	0					0				0	

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



Historical Comments	
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.
03/08/16	Oil is in good condition, no issues. Please resample at the next maintenance interval.
03/03/15	The sample is showing signs of oxidation due to the high GCD 90% value. Please resample in 6 months to monitor oxidation. (GCD) 90% Distillation Point is severely high.

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