

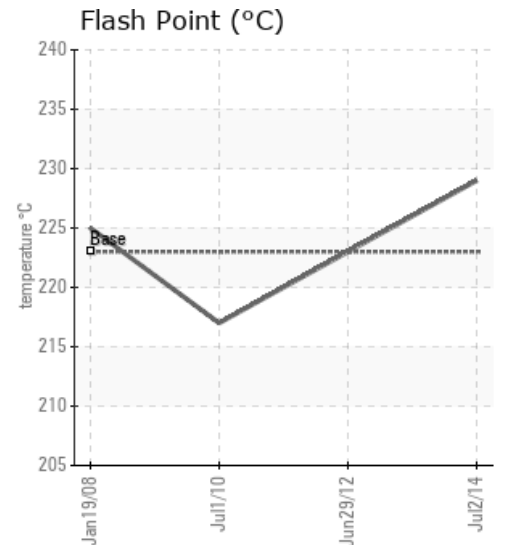
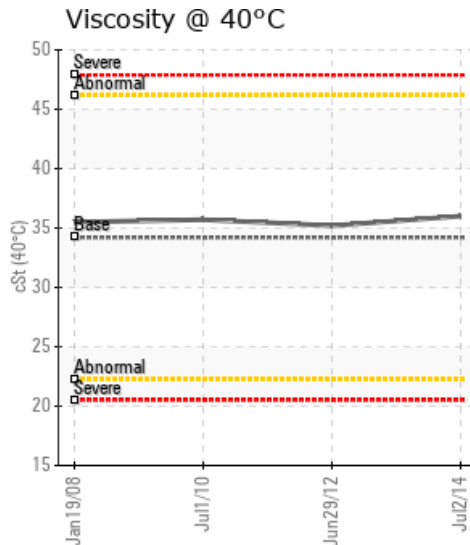
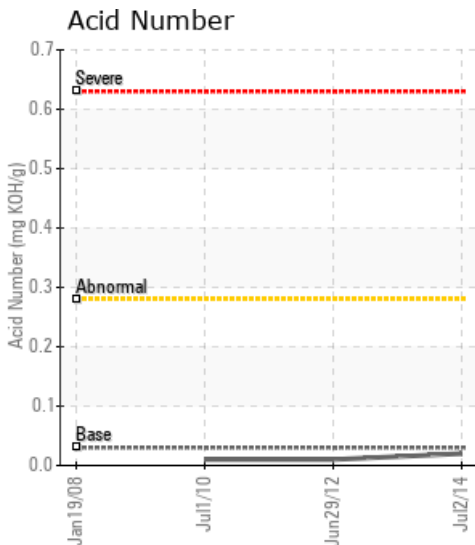
WEST SYSTEM

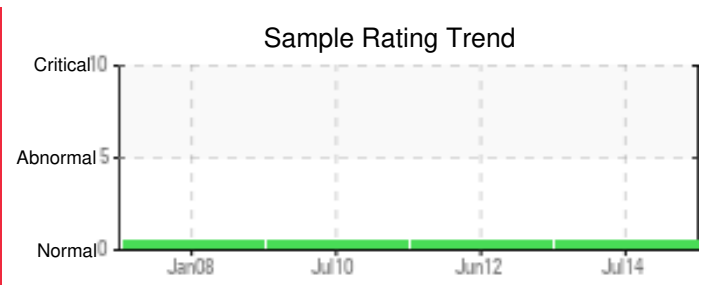
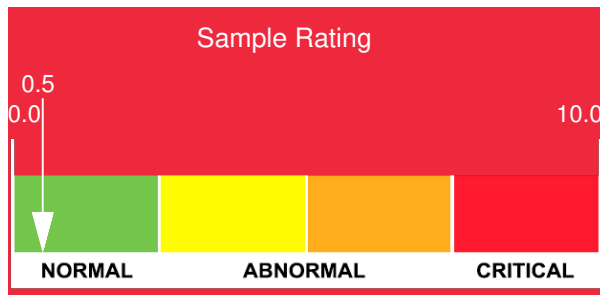
Customer: PTRHTF10182	System Information	Sample Information
American Cast Iron Pipe Co. 2930 NO 16th St. Birmingham, AL 35207 USA Attn: Jeremy Mowry Tel: (205)325-7905 E-Mail: jmowry@american-usa.com	System Volume: 5875 gal Bulk Operating Temp: 540F / 282C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: WUERZ	Lab No: 01932381 Analyst: Gaston Arseneault Sample Date: 07/02/14 Received Date: 07/22/14 Completed: 07/29/14 To discuss this report contact Gaston Arseneault at 973-986-6503

Recommendation: The oil is still showing results that are normal and close to fresh oil. Contamination is minimal. Re-sample same time next year or before a maintenance shut down.

Comments:

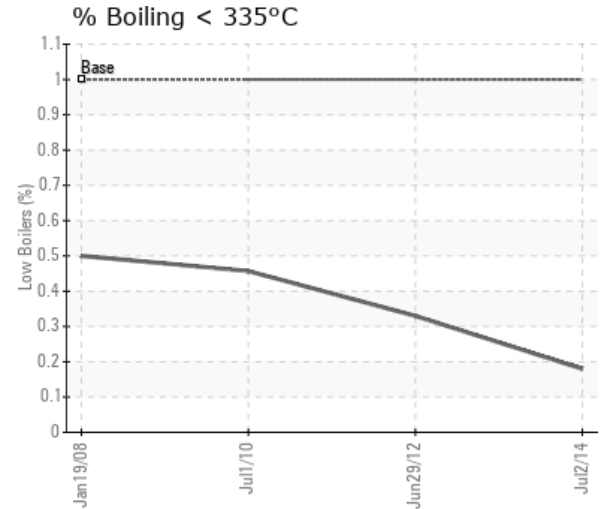
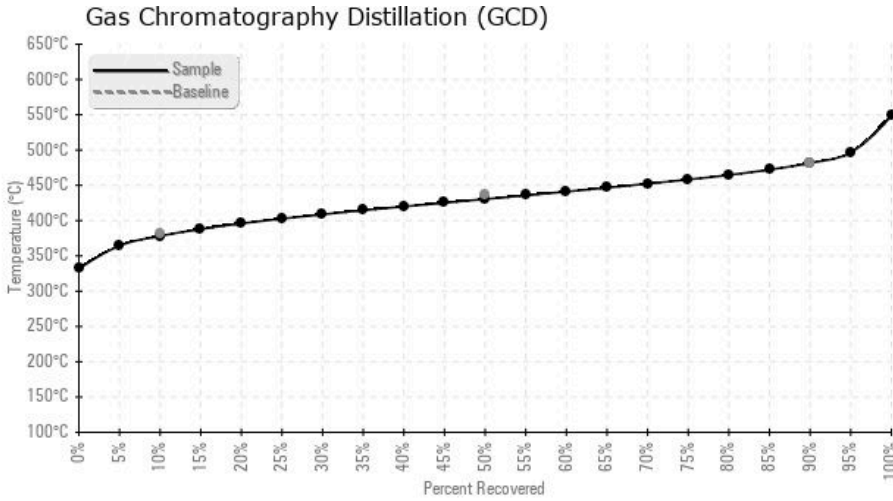
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
07/02/14	07/22/14	7y	PUMP INLET	444 / 229	17.3	36.0	0.02	0.095	713 / 378	807 / 430	899 / 482	0.18
06/29/12	07/09/12		PUMP INLET	433 / 223	49	35.2	0.01	0.012	715 / 380	803 / 428	892 / 478	0.33
07/01/10	07/13/10		PUMP INLET	423 / 217	42	35.7	0.01	0.020	711 / 377	798 / 426	883 / 473	0.457
01/19/08	02/11/08	1y	WEST	437 / 225	33	35.5			714 / 379		894 / 479	0.5
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	
07/02/14	3	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	
06/29/12	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/10	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	1	
01/19/08	2	0	0	0	0	0		0	0	0	0	0		0	0		0			0	0	0	2	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	
06/29/12	The oil properties look very much like fresh oil. Keep up the good work. Try to sample every year if possible. We understand in this case it's like watching grass grow but trending data is key to an oil analysis program.
07/01/10	The oil condition looks excellent. The oil is definitely suitable for further use according to the results
01/19/08	

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.