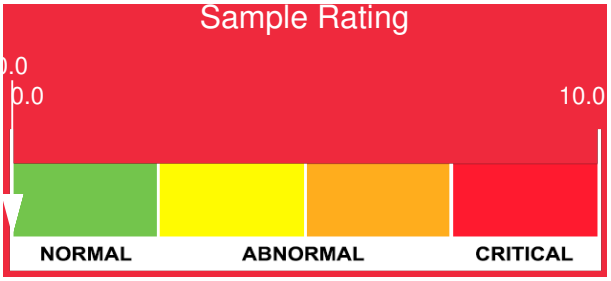
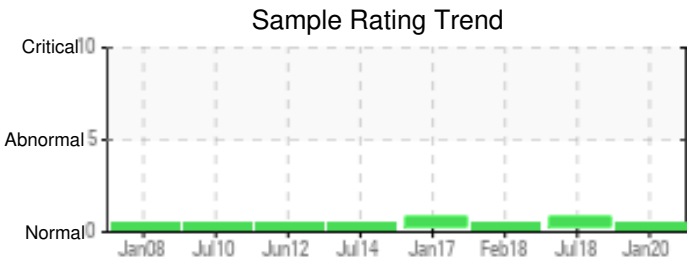




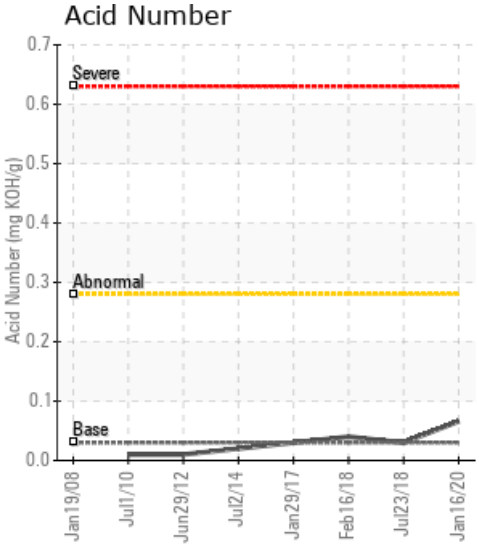
EAST SYSTEM

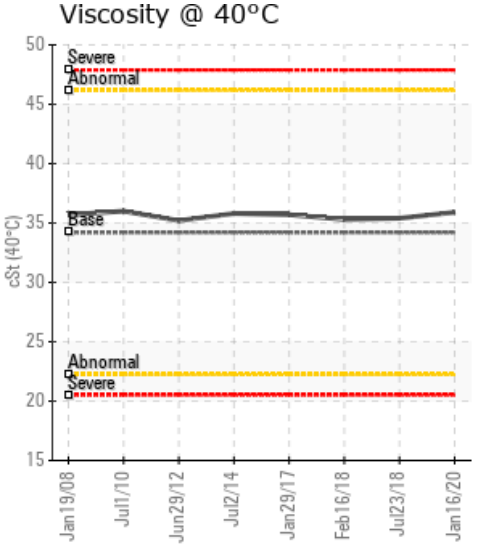
Customer: PTRHTF10182	System Information	Sample Information
American Cast Iron Pipe Co. 1501 31st Avenue North Birmingham, AL 35207 USA Attn: Jeremy Mowry Tel: (205)325-7905 E-Mail: jmowry@american-usa.com	System Volume: 5875 gal Bulk Operating Temp: 540F / 282C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: WUERZ	Lab No: 02335526 Analyst: Jake Finn Sample Date: 01/16/20 Received Date: 02/03/20 Completed: 02/18/20 Jake Finn jake.finn@petrocanadalsp.com

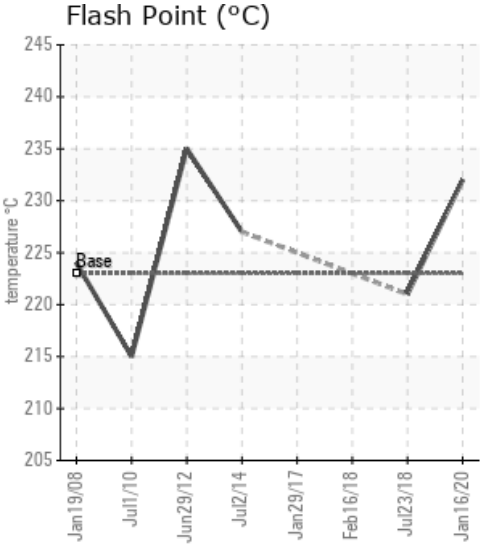
Recommendation: Oil is suitable for continued use. Please resubmit for testing in 12 months.

Comments: No abnormalities noted.

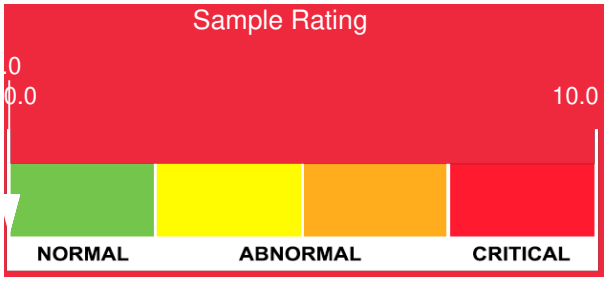
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
01/16/20	02/03/20	12y		450 / 232	8.0	35.9	0.066	0.062	711 / 377	799 / 426	890 / 477	0.00
07/23/18	08/16/18	11y	PUMP OUTLET	430 / 221	2.2	35.4	0.030	0.025	717 / 381	794 / 424	877 / 469	0.00
02/16/18	05/24/18	0y			29.0	35.3	0.04	0.058	711 / 377	799 / 426	909 / 487	0.00
01/29/17	05/24/18	0y			21.2	35.7	0.03	0.037	708 / 376	778 / 414	871 / 466	0.00
07/02/14	07/22/14	7y	PUMP INLET	441 / 227	16.7	35.8	0.02	0.119	713 / 378	808 / 431	899 / 482	0.17
Baseline Data				433 / 223		34.2	0.03		720 / 382	817 / 436	900 / 482	1.00

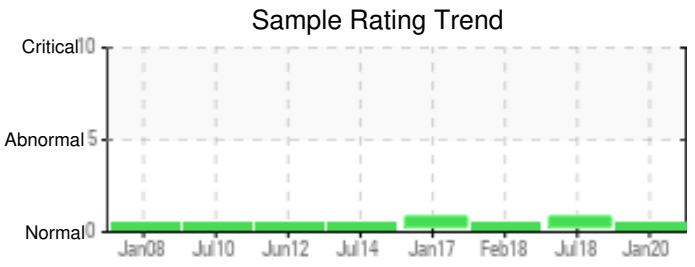






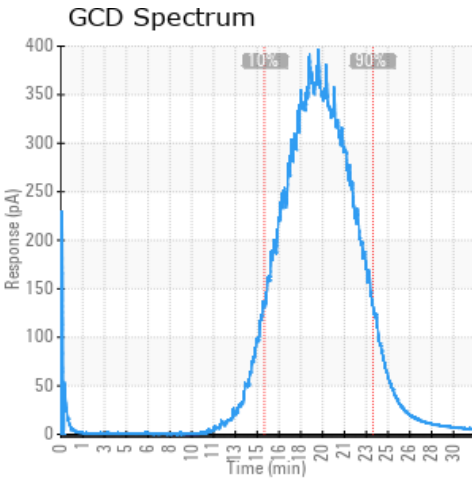
PETRO-CANADA LUBRICANTS

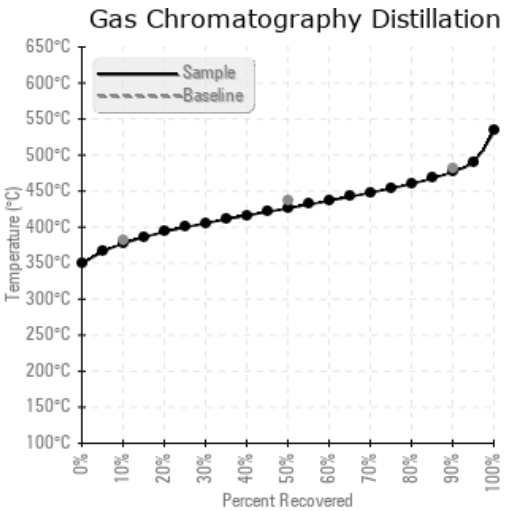


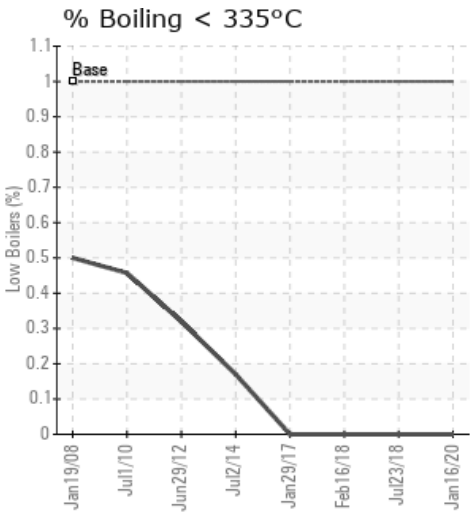


Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
01/16/20	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02/16/18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3
01/29/17	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3
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	0	0
Baseline Data			0	0						0			0	0					0				0	

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







Historical Comments

07/23/18	Fluid is suitable for continued use. (GCD) 90% Distillation Point is marginally low. 'Venting' the system could bring this value up to normal. Light debris noticed by the lab. Please change any system filters and/or filter the system fluid safely during any shutdowns with a portable kidney-loop filtration system.
02/16/18	Fluid is suitable for continued use. Please re-submit annual sample of Petro-therm in May 2019. During a safe shutdown opportunity the fluid can be filtered with a kidney-loop filtration system to clean up any contamination. If system has any filters, please schedule them to be changed.Light Debris noticed in sample of fluid
01/29/17	Fluid is suitable for continued use. 'Venting' the system may improve the 90% distillation point. Changing system filters or filtering fluid with a kidney loop system may reduce any 'debris' found in sample. Please include the age of the fluid and the age of the heat transfer system on next year's label. Re-submit fluid sample in May 2019Light debris seen in fluid sample. (GCD) 90% Distillation Point is abnormally low.
07/02/14	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.