

ROSEBURG PEMBROKE

Customer: PTRHTF30101
 Roseburg Pembroke MDF Inc.
 777 Fibreboard Drive
 Pembroke, ON K8A 6W5 Canada
 Attn: Dan Havis
 Tel: (613)732-3939
 E-Mail: danielh@rfpco.com

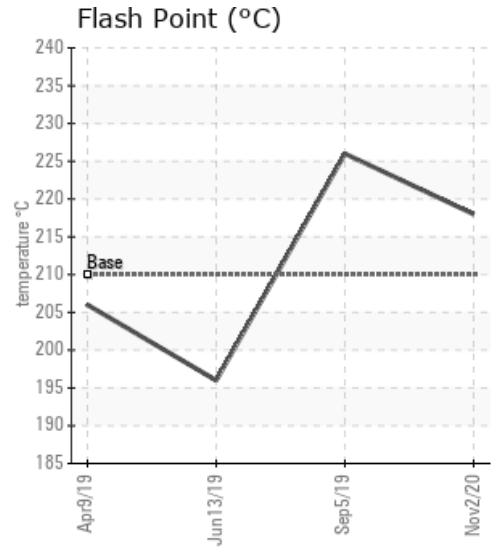
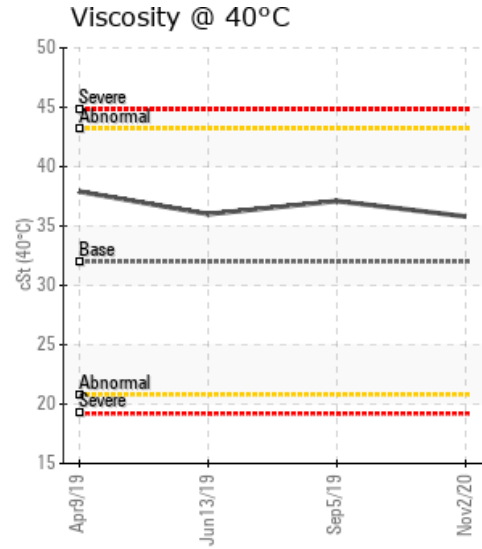
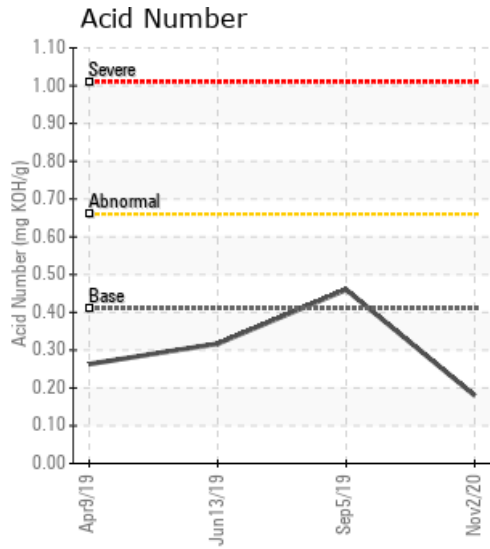
System Information
 System Volume: 100000 gal
 Bulk Operating Temp: 518F / 270C
 Heating Source:
 Blanket:
 Fluid: HEAT TRANSFER FLUID ISO 32
 Make:

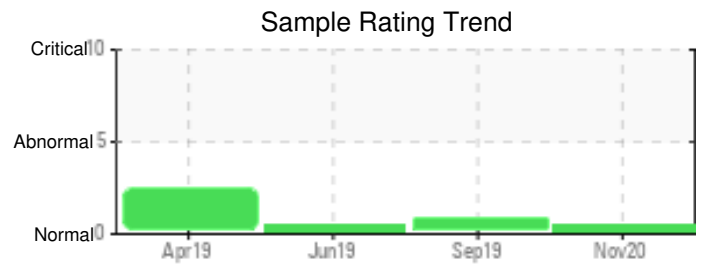
Sample Information
 Lab No: 02385845
 Analyst: Pierre Castagne
 Sample Date: 11/02/20
 Received Date: 11/06/20
 Completed: 11/11/20
 Pierre Castagne
 pierre.castagne@petrocanadalsp.com

Recommendation: The oil is good for continuous usage. Resample in 6 months.

Comments:

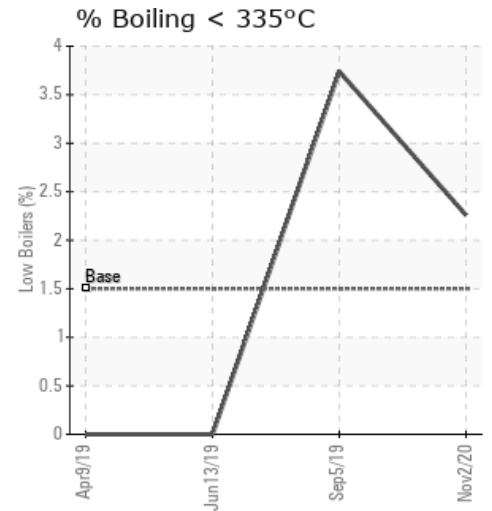
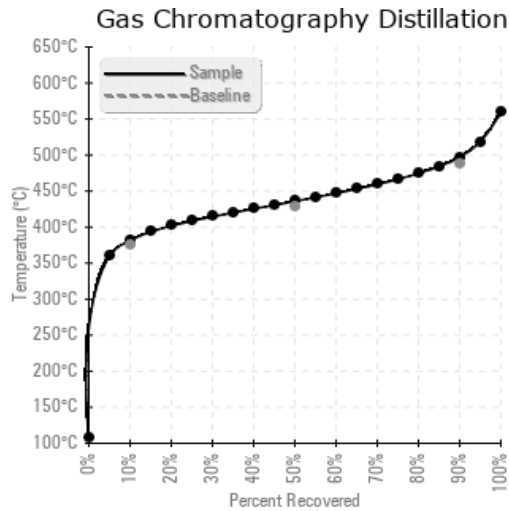
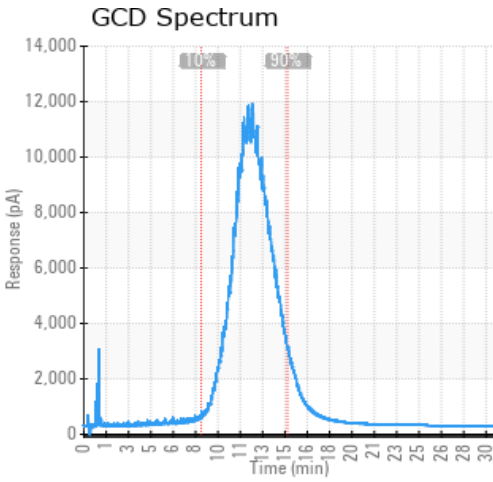
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
11/02/20	11/06/20	0h	Filtration test	424 / 218	18.5	35.8	0.18	0.110	719 / 382	817 / 436	927 / 497	2.26
09/05/19	09/09/19	0h		439 / 226	17.8	37.1	0.460	0.168	685 / 363	789 / 421	892 / 478	3.74
06/13/19	06/14/19	0h	BOILER	385 / 196	138.4	36.0	0.317	0.059	723 / 384	815 / 435	928 / 498	0.00
04/09/19	04/12/19	0h	HH PUMP SUSTION	403 / 206	0.5	37.9	0.263	0.152	731 / 389	821 / 438	932 / 500	0.00
Baseline Data				410 / 210		32	0.41		707 / 375	802 / 428	910 / 488	1.5





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
11/02/20	3	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	3	3
09/05/19	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	4
06/13/19	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04/09/19	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	
09/05/19	Our GCD 90% are marginally high, we have slight oxydation of the oil. The oil is Ok for continuous use. (GCD) 90% Distillation Point is marginally low.
06/13/19	The oil is OK, for continuous use
04/09/19	The Petro-Therm is good for continuous use, resample at your regular sample interval. GCD @10% and GCD @ 90% are marginally high, Acidity is marginally high. (GCD) 90% Distillation Point is marginally high.

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.