

WANSON

Customer: PTRHTF40025
 ALBERT VAN ZOONEN BV
 GROTEWALLERWEG 4
 NORTH HOLLAND
 SCHAGEN, NOR NETHERLANDS
 Attn: Maintenance Manager
 Tel:
 E-Mail:

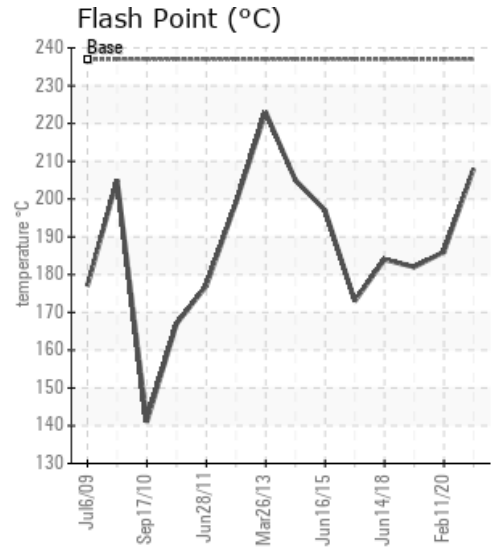
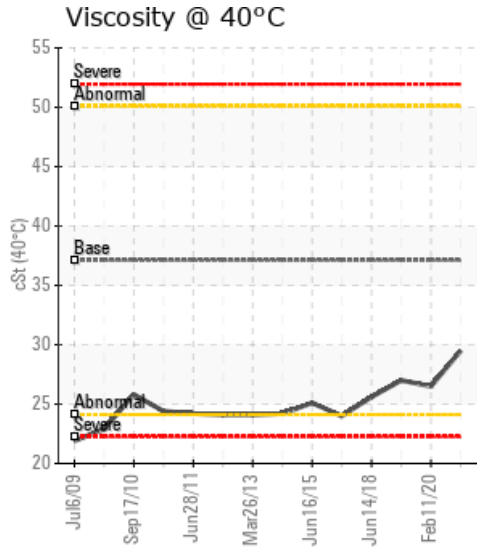
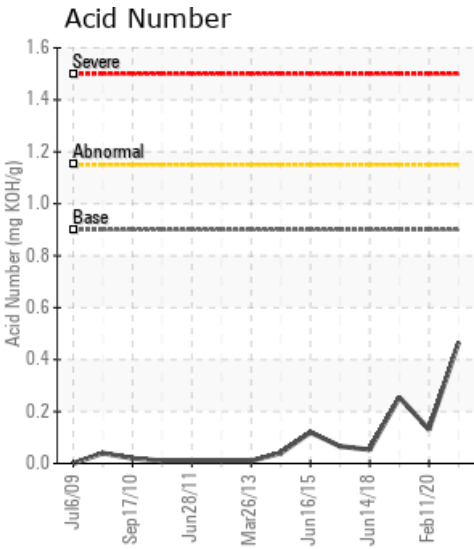
System Information
 System Volume: 1500 ltr
 Bulk Operating Temp: 275F / 135C
 Heating Source:
 Blanket:
 Fluid: PETRO CANADA PURITY FG HEAT TRANSFER FLUID
 Make: WANSON

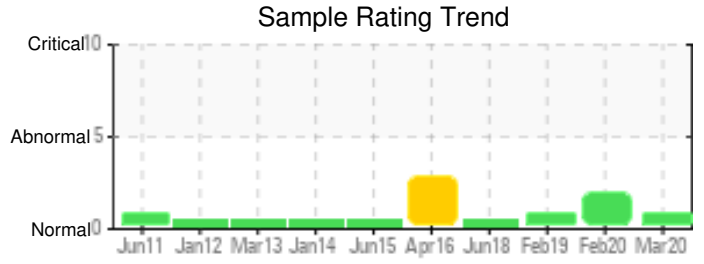
Sample Information
 Lab No: 02344795
 Analyst: Matthias Voss
 Sample Date: 03/13/20
 Received Date: 03/20/20
 Completed: 05/04/20
 Matthias Voss
 Matthias.Voss@petrocanadalsp.com

Recommendation: Marginal high number for GCD 10%. Overall in good condition and fit for use. Viscosity for a 1w sample is a little low so if it is a result of change, has there been a full changeout or is there some carryover?

Comments: (GCD) 10% Distillation Point is marginally high.

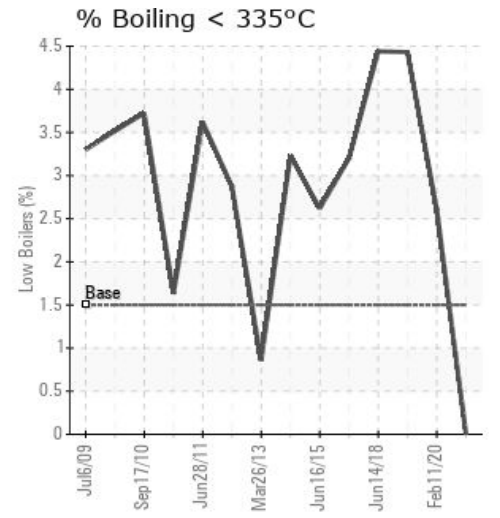
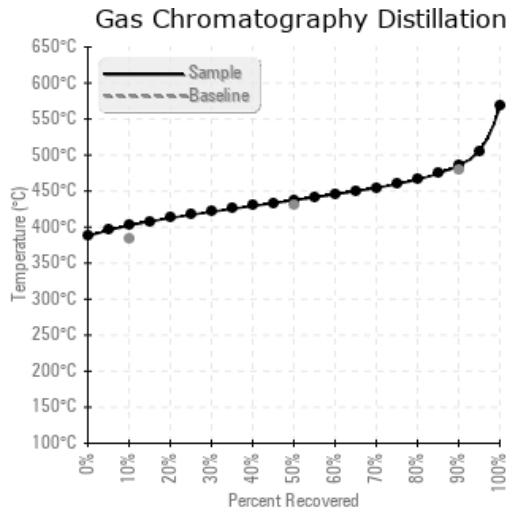
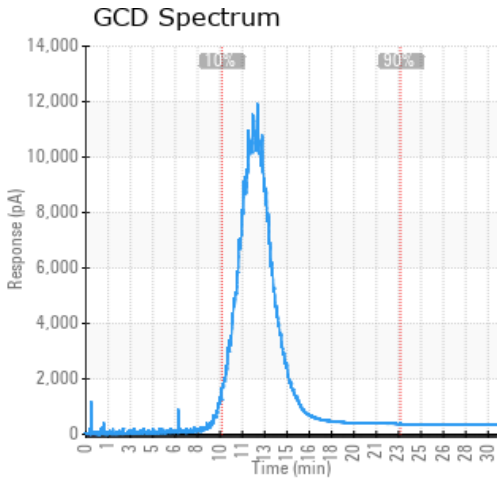
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
03/13/20	03/20/20	1w		406 / 208	1.2	29.5	0.467	0.076	756 / 402	819 / 437	906 / 486	0.00
02/11/20	02/20/20	0w		367 / 186	22.0	26.5	0.131	0.055	709 / 376	813 / 434	902 / 484	2.61
02/15/19	02/21/19	0w		360 / 182	52.7	27.0	0.255	0.055	688 / 364	785 / 418	880 / 471	4.43
06/14/18	06/21/18	0w		363 / 184	11.0	25.6	0.053	0.060	681 / 361	775 / 413	883 / 473	4.44
04/05/16	04/11/16	0w		343 / 173	116.2	24.0	0.066	0.044	701 / 372	791 / 422	862 / 461	3.20
Baseline Data				459 / 237		37.12	0.90		721 / 383	807 / 431	892 / 478	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
03/13/20	4	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	0
02/11/20	9	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	0
02/15/19	24	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	2
06/14/18	33	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	2
04/05/16	14	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Baseline Data			0	0						0			0	0					0				230	

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



Historical Comments	
02/11/20	Competitor product so cannot offer recommendations related to the fluid. Sample is though similar to previous years' samples. COC Flash Point is marginally low.
02/15/19	Competitor product so cannot offer recommendations related to the fluid. Sample is though similar to previous years' samples. COC Flash Point is marginally low. (GCD) 90% Distillation Point is marginally low.
06/14/18	Competitor product (Shell Therma B), do not have technical data to comment with accuracy on competitor product. COC Flash Point is marginally low. (GCD) 90% Distillation Point is marginally low.
04/05/16	Not recognized as a Petro-Canada product. (GCD) 90% Distillation Point is severely low. COC Flash Point is abnormally low.

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