

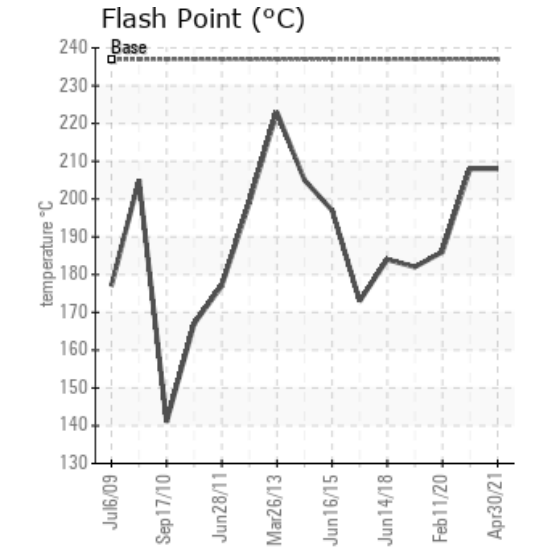
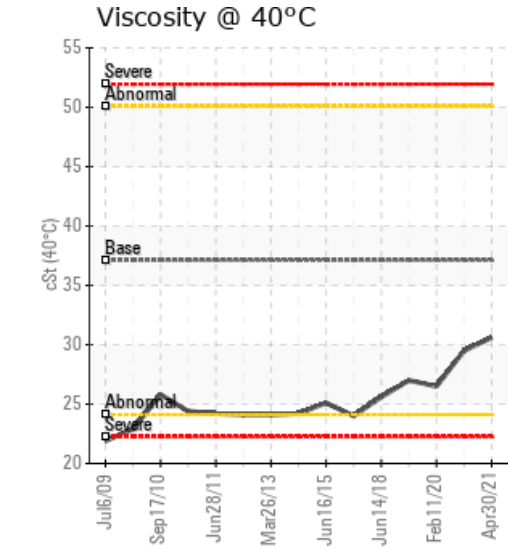
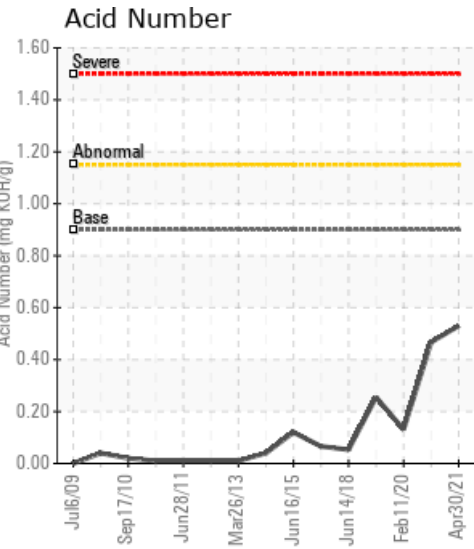
# WANSON

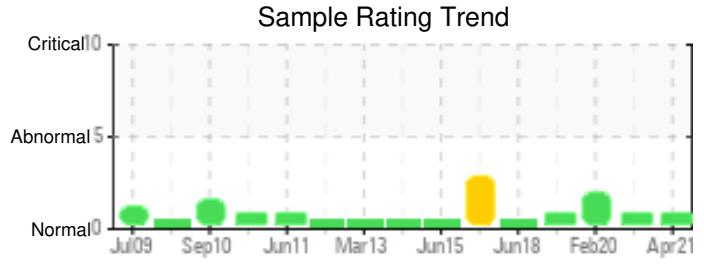
Customer: PTRHTF40025	System Information	Sample Information
ALBERT VAN ZOONEN BV GROTEWALLERWEG 4 NORTH HOLLAND SCHAGEN, NOR NETHERLANDS Attn: Maintenance Manager Tel: E-Mail:	System Volume: 1500 ltr Bulk Operating Temp: 275F / 135C Heating Source: Blanket: Fluid: PETRO CANADA PURITY FG HEAT TRANSFER FLUID Make: WANSON	Lab No: 02419740 Analyst: Luis Rodriguez Sample Date: 04/30/21 Received Date: 05/07/21 Completed: 06/15/21 Luis Rodriguez luis.rodriquez@hollyfrontier.com

Recommendation: Corrected report: Oil is overall in good condition and fit for use and viscosity is now in the trend.

Comments: (GCD) 90% Distillation Point is marginally high.

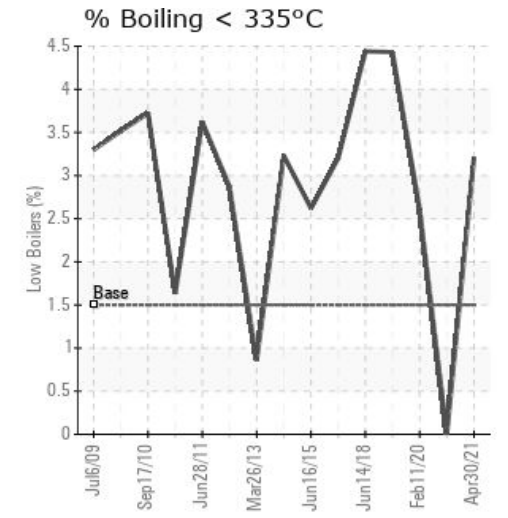
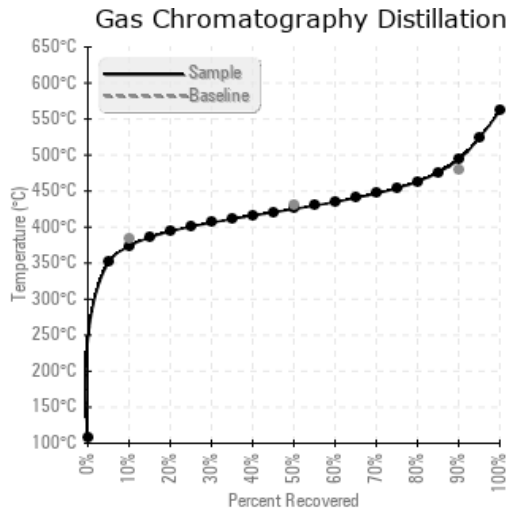
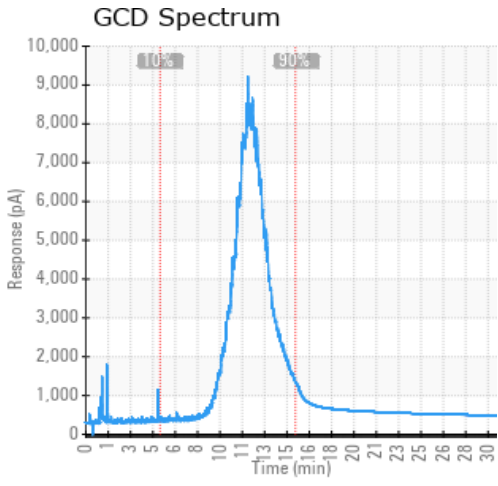
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
04/30/21	05/07/21	52.0w		406 / 208	13.0	30.6	0.53	0.047	704 / 374	797 / 425	920 / 493	3.21
03/13/20	03/20/20	1.0w		406 / 208	1.2	29.5	0.467	0.076	756 / 402	819 / 437	906 / 486	0.00
02/11/20	02/20/20	0.0w		367 / 186	22.0	26.5	0.131	0.055	709 / 376	813 / 434	902 / 484	2.61
02/15/19	02/21/19	0.0w		360 / 182	52.7	27.0	0.255	0.055	688 / 364	785 / 418	880 / 471	4.43
06/14/18	06/21/18	0.0w		363 / 184	11.0	25.6	0.053	0.060	681 / 361	775 / 413	883 / 473	4.44
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
04/30/21	6	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0
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
<b>Baseline Data</b>			0	0						0			0	0				0	0				230	

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



Historical Comments	
03/13/20	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? (GCD) 10% Distillation Point is marginally high.
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 Thermia 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.

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