

WANSON COMBI 1900

Customer: PTRHTF40035
 GEBR HAKVOORT BV
 ZUIDOOSTRAK 2
 FLEVOLAND
 URK, FLE NETHERLANDS
 Attn: Maintenance Manager
 Tel:
 E-Mail: w.snyenr@klt.nl

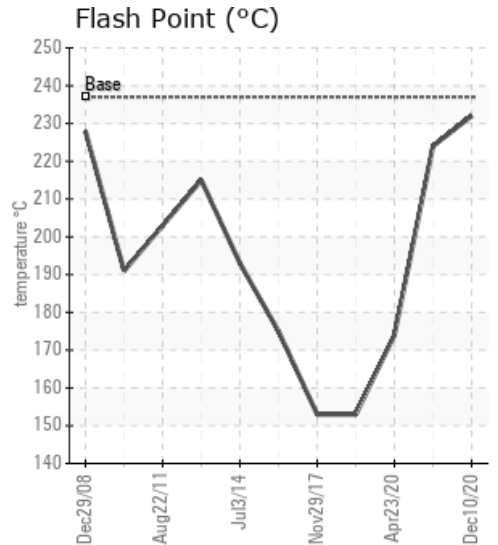
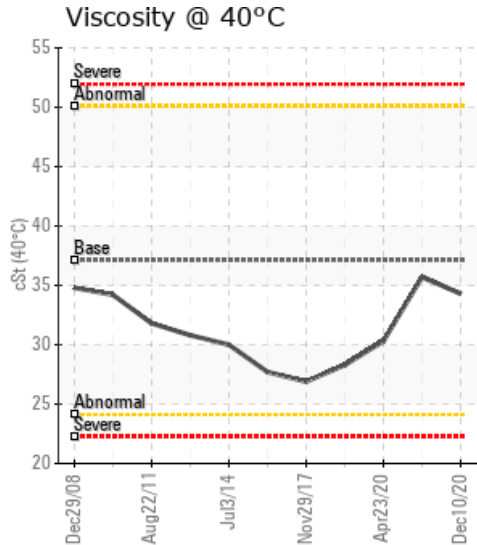
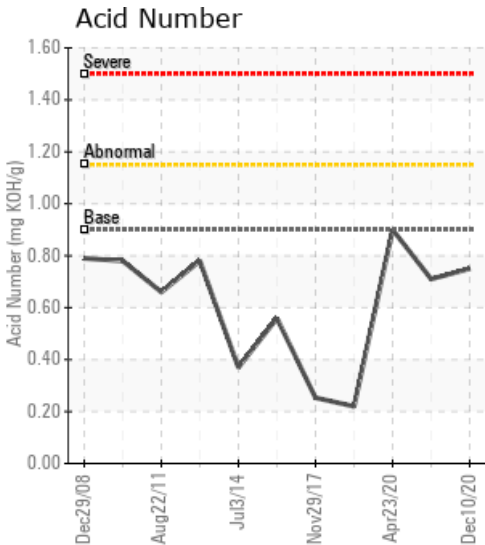
System Information
 System Volume: 1600 ltr
 Bulk Operating Temp: 300F / 149C
 Heating Source:
 Blanket:
 Fluid: PETRO CANADA PURITY FG HEAT TRANSFER FLUID
 Make: WANSON

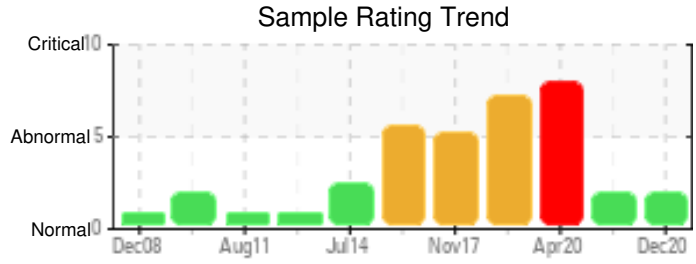
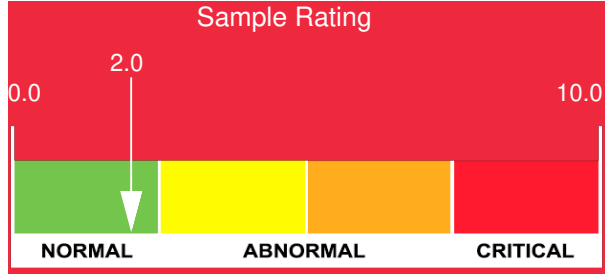
Sample Information
 Lab No: 02395382
 Analyst: Matthias Voss
 Sample Date: 12/10/20
 Received Date: 01/04/21
 Completed: 01/07/21
 Matthias Voss
 Matthias.Voss@petrocanadalsp.com

Recommendation: Fluid fit for further use. Send in sample at next scheduled interval.

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

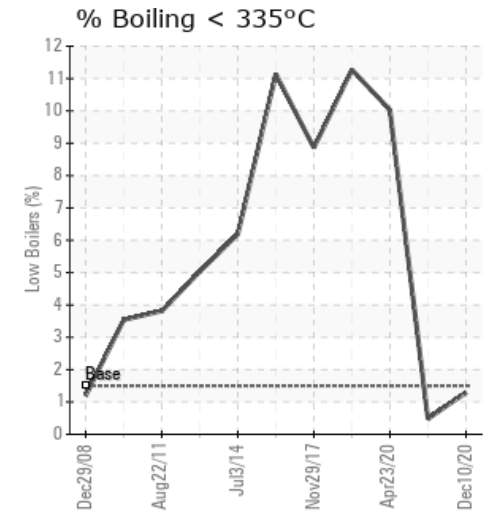
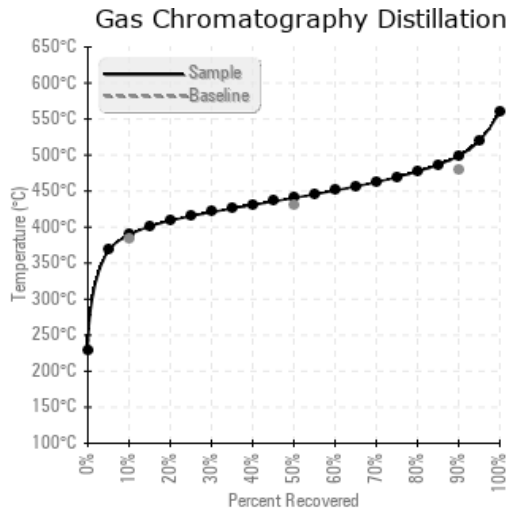
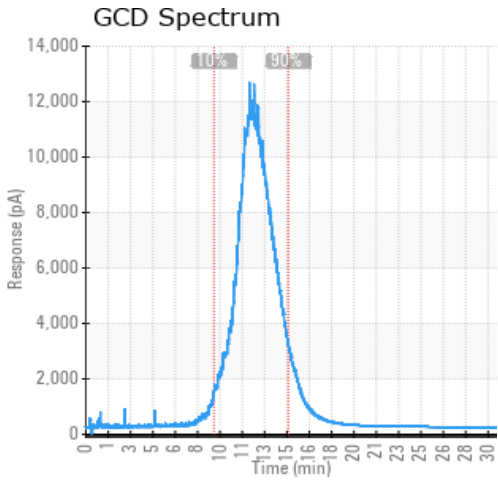
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
12/10/20	01/04/21	0w		450 / 232	19.2	34.3	0.75	0.069	732 / 389	825 / 441	930 / 499	1.29
09/29/20	10/06/20	1w		435 / 224	64.5	35.7	0.71	0.147	738 / 392	826 / 441	931 / 499	0.48
04/23/20	04/30/20	12w		345 / 174	189.7	30.3	0.90	0.760	628 / 331	801 / 427	912 / 489	10.03
09/21/18	09/27/18	10w		307 / 153	59.7	28.3	0.22	0.713	611 / 322	790 / 421	892 / 478	11.27
11/29/17	12/05/17	9w		307 / 153	26.5	26.9	0.253	0.463	642 / 339	796 / 424	902 / 483	8.86
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
12/10/20	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	16	0
09/29/20	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	34	0
04/23/20	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36	1
09/21/18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0
11/29/17	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0
Baseline Data			0	0						0			0	0				0	0				230	

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



Historical Comments

09/29/20	Fluid fit for further use. Send in sample at next scheduled interval. (GCD) 90% Distillation Point is severely high.
04/23/20	Although Flash Pt (COC) and GCD have improved since the last analysis, recommendation to change oil remains. The overall sample rating has got worse, insoluble have increased and this supports further fluid degradation. GCD plot shows strong evidence of cracking Pentane Insolubles levels are severely high. (GCD) 10% Distillation Point is severely low. COC Flash Point is severely low. (GCD) % < 335°C is marginally high. (GCD) 90% Distillation Point is marginally high.
09/21/18	Flash point off spec low again, sample rating and pentane insols both worse than previous year showing further fluid degradation. Recommend a fluid change at earliest opportunity Pentane Insolubles levels are severely high. (GCD) 10% Distillation Point is severely low. COC Flash Point is severely low. (GCD) % < 335°C is marginally high.
11/29/17	Flash Point off spec very low, insoluble high showing fluid degradation. Recommend fluid change. Pentane Insolubles levels are abnormally high. COC Flash Point is severely low. (GCD) 10% Distillation Point is abnormally low. (GCD) % < 335°C 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.