

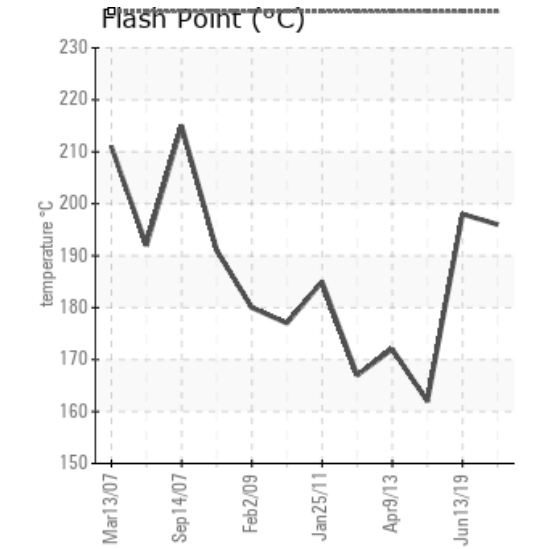
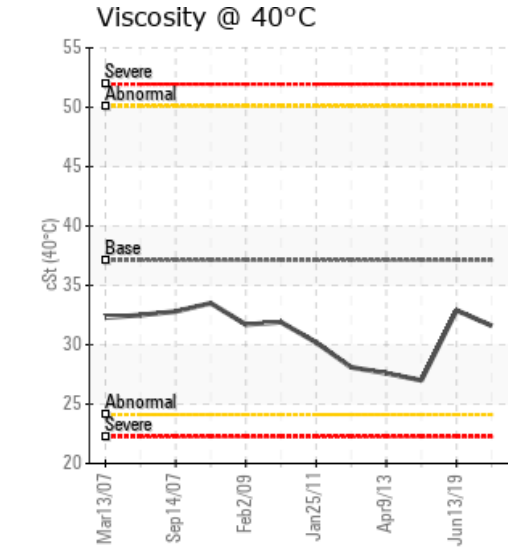
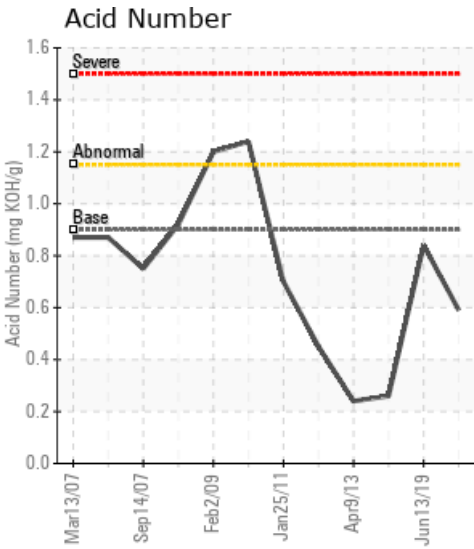
# WANSON 450LN - KONUS

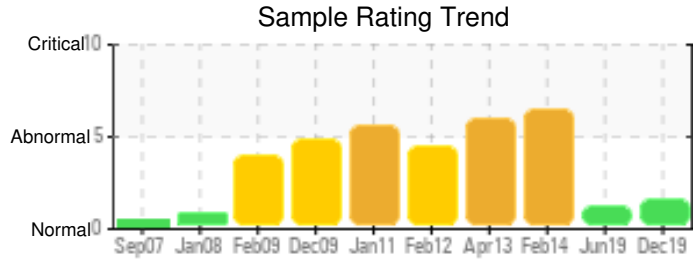
Customer: PTRHTF40042	System Information	Sample Information
MORA NV - MOL BELGIUM BERKENBOSSENLAAN 1 MOL 2400 MOL, 2400 Belgium Attn: WILBERT SNIJERS Tel: E-Mail: w.snijers@klt.nl	System Volume: 1800 ltr Bulk Operating Temp: 265F / 129C Heating Source: Blanket: Fluid: PETRO CANADA PURITY FG HEAT TRANSFER FLUID Make: WANSON	Lab No: 02326084 Analyst: Philip Riley Sample Date: 12/03/19 Received Date: 12/10/19 Completed: 12/17/19

Recommendation: Is the time recorded on the oil at 2m correct? All parameters on the fluid test to spec except for GCD Dist at 90% and COC which are marginally out of normal range. Not areas for concern, fluid fit for further use and please resample in 12 months

Comments: (GCD) 90% Distillation Point is abnormally high. COC Flash Point is marginally low.

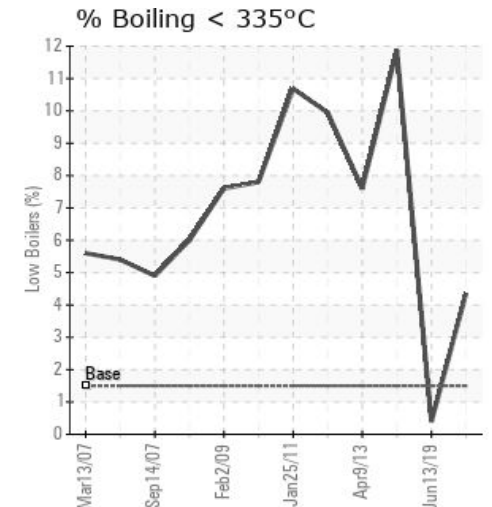
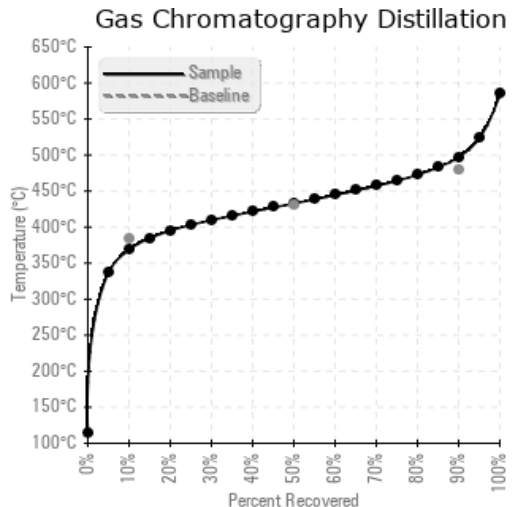
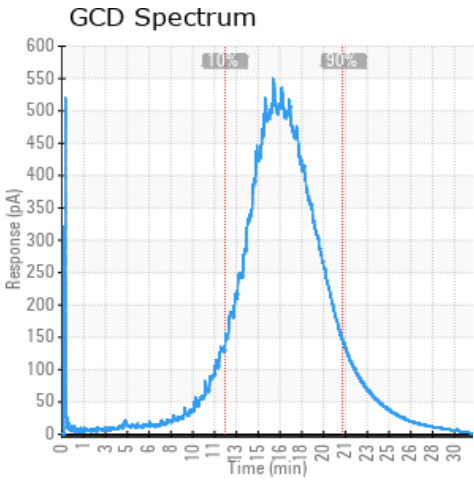
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
12/03/19	12/10/19	1m		385 / 196	13.5	31.6	0.591	0.157	696 / 369	811 / 433	927 / 497	4.35
06/13/19	06/18/19	0m		388 / 198	35.7	32.9	0.840	0.121	694 / 368	784 / 418	880 / 471	0.40
02/18/14	02/21/14	7m	PTRHTF40042	324 / 162	133.1	27.0	0.26	1.21	603 / 317	798 / 426	910 / 488	11.87
04/09/13	04/15/13	6m		342 / 172	43.6	27.6	0.24	0.612	652 / 344	788 / 420	889 / 476	7.60
02/02/12	02/13/12	5m	NA	333 / 167	38	28.1	0.45	0.022	636 / 336	798 / 426	894 / 479	9.945
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	
12/03/19	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	40	0	
06/13/19	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0	159	0	
02/18/14	164	0	0	0	0	5	0	0	0	0	2	1	0	0	0	0	1	0	0	0	1	0	97	0	
04/09/13	88	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	73	0	
02/02/12	5	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	3	0	0	1	40	0	
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	
06/13/19	Levels of Calcium and Phosphorus are unusual and high. COuld there be remnants of a cleaning agent or similar on change? All other parameters look to be in normal range with slightly low flash but nothing of concern. Fit for further use Calcium ppm levels are abnormally high. COC Flash Point is marginally low.
02/18/14	Oil should be changed at customers first opportunity. Pentane Insolubles levels are severely high. (GCD) 10% Distillation Point is severely low. (GCD) % < 335°C is abnormally high. COC Flash Point is abnormally low.
04/09/13	Iron ppm levels are noted. Pentane Insolubles levels are severely high. (GCD) 90% Distillation Point is low. (GCD) % < 335°C is marginally high. (GCD) 10% Distillation Point is marginally low. COC Flash Point is marginally low.
02/02/12	Sample fit for further service

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