

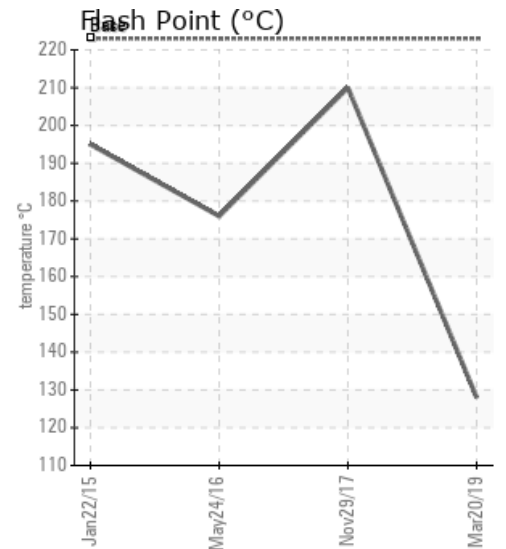
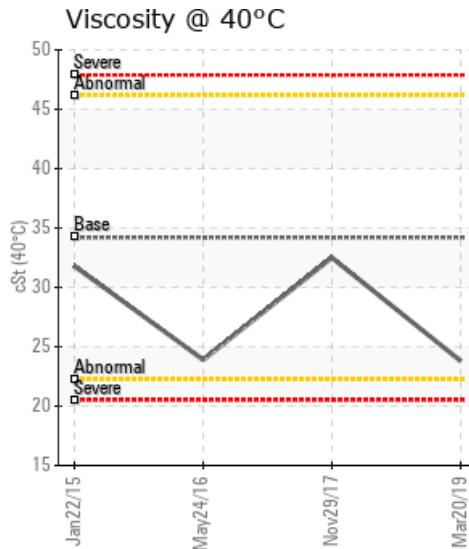
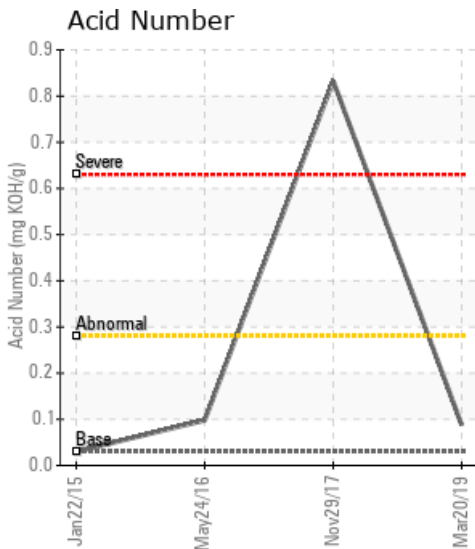
WANSON450 NEW SYSTEM

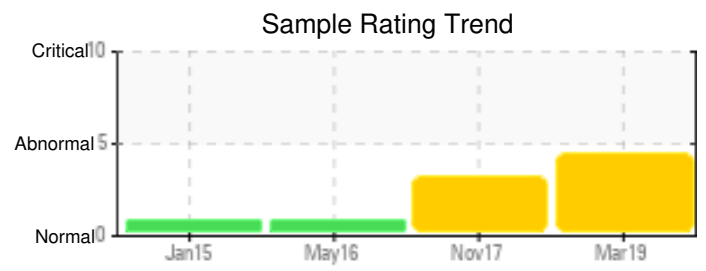
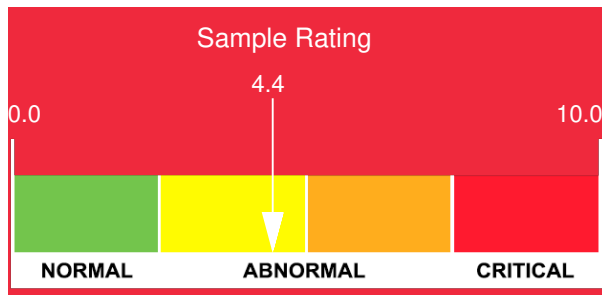
Customer: PTRHTF40022	System Information	Sample Information
MAYONNA BV NOORDGAT 1 FLEVOLAND URK, FLE NETHERLANDS Attn: Maintenance Manager Tel: E-Mail:	System Volume: 1400 ltr Bulk Operating Temp: 500F / 260C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: WANSON	Lab No: 02274596 Analyst: Philip Riley Sample Date: 03/20/19 Received Date: 03/21/19 Completed: 03/26/19

Recommendation: COC Flash Pt extremely low. If venting (if can be done safely) does not recover the flash point, recommend change of oil. Viscosity is not consistent with Petrotherm HTF.

Comments: COC Flash Point is severely low. (GCD) 10% Distillation Point is abnormally low. (GCD) % < 335°C is marginally high.

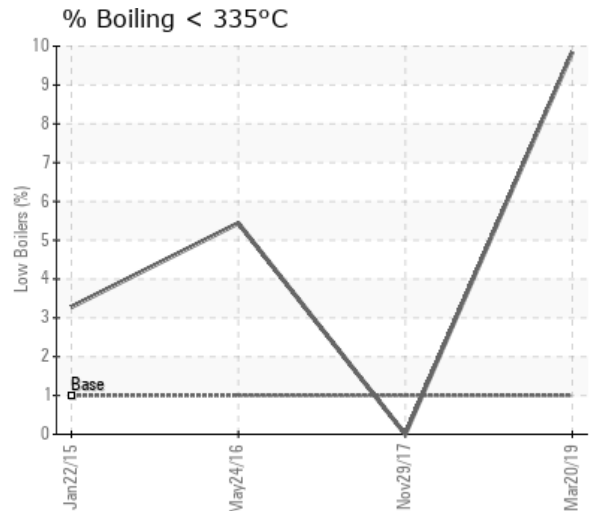
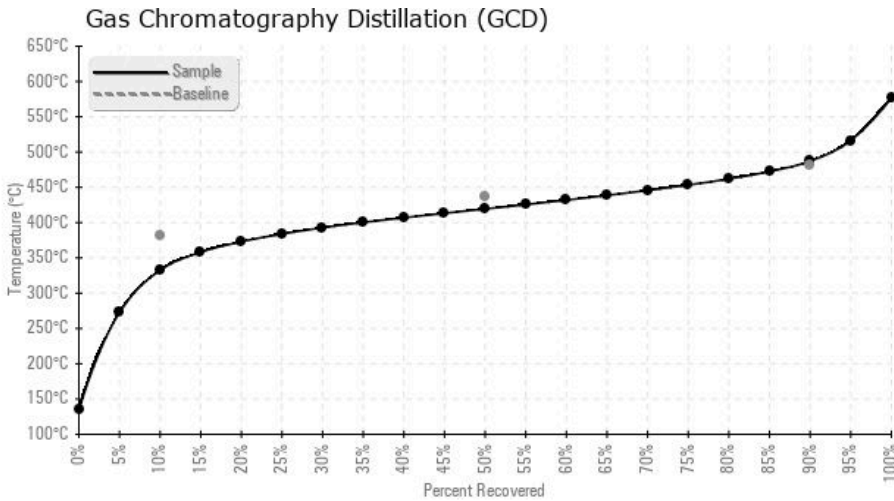
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
03/20/19	03/21/19	6y	031519	262 / 128	8.8	23.8	0.088	0.078	631 / 333	787 / 419	909 / 487	9.85
11/29/17	12/05/17	5y		410 / 210	32.5	32.5	0.833	0.160	723 / 384	819 / 437	904 / 484	0.00
05/24/16	05/27/16	4y	PTRHTF40022	349 / 176	24.5	23.9	0.098	0.055	679 / 360	802 / 428	914 / 490	5.44
01/22/15	02/06/15	2y		383 / 195	18.6	31.8	0.03	0.029	699 / 370	815 / 435	920 / 493	3.28
Baseline Data				433 / 223		34.2	0.03		720 / 382	817 / 436	900 / 482	1.00





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
03/20/19	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/29/17	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56	7
05/24/16	18	0	0	0	11	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
01/22/15	9	0	0	0	7	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Baseline Data			0	0						0			0	0					0				0	

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



Historical Comments	
11/29/17	Acid number high and above condemnation limits. Most parameters OK except that iron has crept upwards, still within limits but a step change and likely related to acid number. Look to re-sample at 6 months to check, with view to change if fluid has degraded further. Acid Number (AN) is severely high.
05/24/16	The Flash Point is low but not problematic at this time. There are indications of low boilers being present in small amounts. Please remove low boilers if possible. The oil appears fit for further service, suggest sample at next scheduled maintenance interval. COC Flash Point is abnormally low.
01/22/15	Oil appears to be in good condition. Sample at next scheduled maintenance interval.