

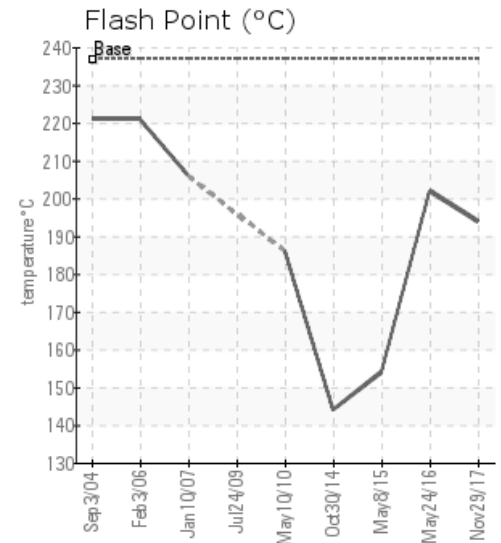
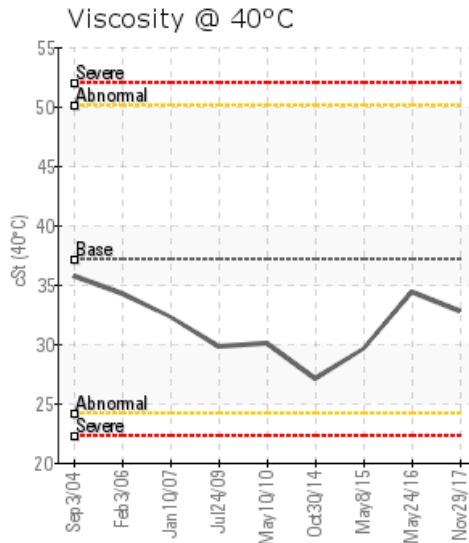
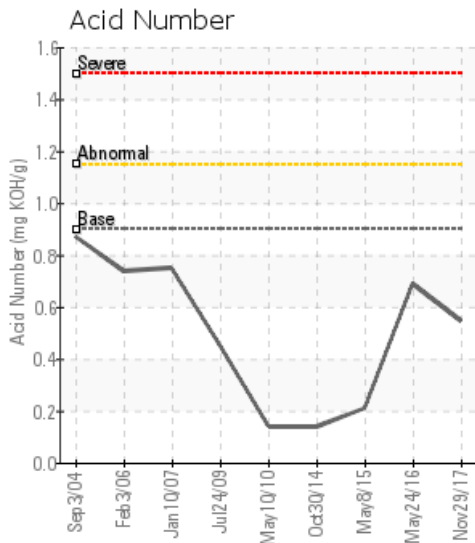
WANSON

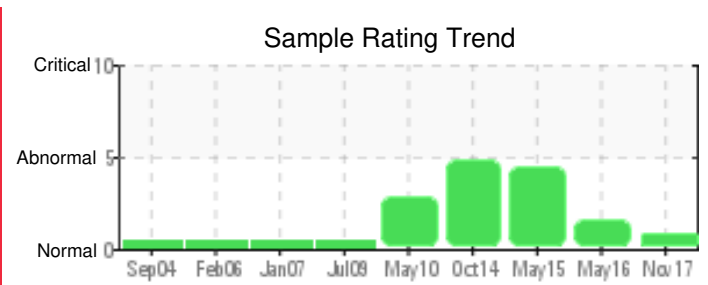
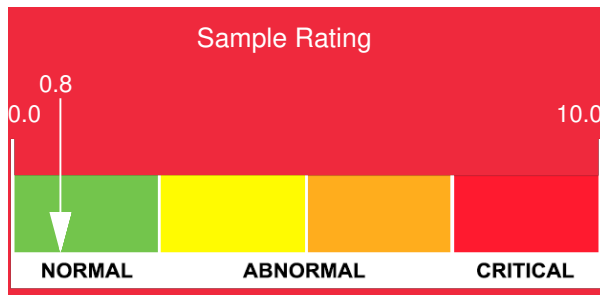
Customer: PTRHTF40018	System Information	Sample Information
KRAMER FISH BV MIDDELGRONDEN 1 FLEVOLAND URK, FLE NETHERLANDS Attn: Maintenance Manager Tel: E-Mail:	System Volume: 1000 ltr Bulk Operating Temp: 275F / 135C Heating Source: Blanket: Fluid: PETRO CANADA PURITY FG HEAT TRANSFER FLUID Make: WANSON	Lab No: 02185905 Analyst: Philip Riley Sample Date: 11/29/17 Received Date: 12/05/17 Completed: 12/11/17 To discuss this report contact Philip Riley at (440)124-4378171

Recommendation: Slight increase in wear but well within limits. Attempt to remove light ends by venting if safe to do so. Fit for further use but annual sample required

Comments: COC Flash Point is marginally low.

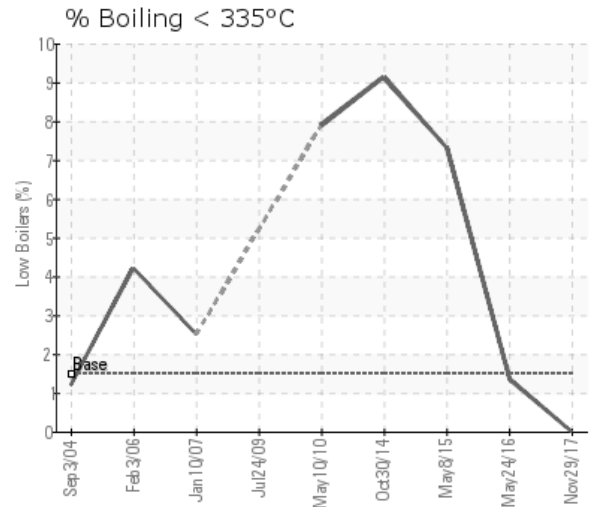
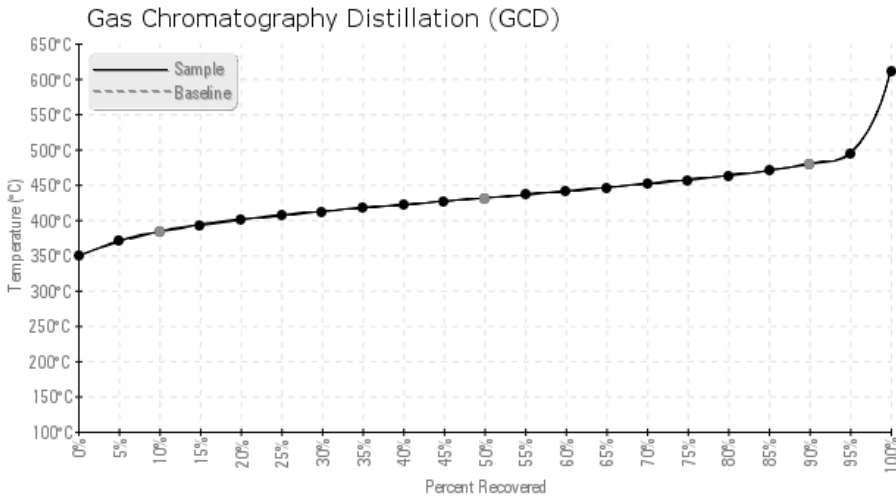
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
11/29/17	12/05/17	2y		381 / 194	13.9	32.8	0.548	0.096	722 / 383	808 / 431	895 / 479	0.00
05/24/16	05/27/16	1y	PTRHTF40018	396 / 202	34.8	34.4	0.690	0.069	712 / 378	813 / 434	913 / 490	1.37
05/08/15	05/15/15	10y		309 / 154	67.4	29.6	0.21	0.059	659 / 349	809 / 432	935 / 501	7.34
10/30/14	11/12/14	7y		291 / 144	35.1	27.1	0.14	0.055	640 / 338	809 / 431	946 / 508	9.13
05/10/10	10/11/10	6y	NA	367 / 186	78	30.1	0.14	0.046	663 / 351	810 / 432	927 / 497	7.9
07/24/09	07/24/09	4y				29.8	0.45					
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
11/29/17	57	0	0	0	1	0	1	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	29	1
05/24/16	9	0	0	0	2	1	1	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	32	1
05/08/15	5	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	24	1
10/30/14	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0
05/10/10	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	1
07/24/09	10	0	0	0	0	0	2	0	0	0	0	0		0	0		0			0	0	0	8	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

05/24/16	Oil is fit for further service. Suggest sample at next scheduled maintenance interval. (GCD) 90% Distillation Point is marginally high. COC Flash Point is marginally low.
05/08/15	Oil appears to be fit for further service at this time. Sample at next scheduled maintenance interval. COC Flash Point is abnormally low. (GCD) 10% Distillation Point is abnormally low. (GCD) % < 335°C is marginally high. (GCD) 90% Distillation Point is marginally high.
10/30/14	Flash point is low indicating presence of low boilers. Remove low boilers if possible. If low boilers cannot be removed prepare to replace oil within the next 6 months (GCD) 10% Distillation Point is severely low. COC Flash Point is severely low. (GCD) 90% Distillation Point is abnormally high. (GCD) % < 335°C is marginally high.
05/10/10	
07/24/09	

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