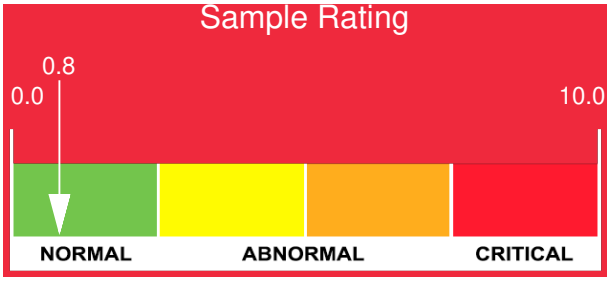
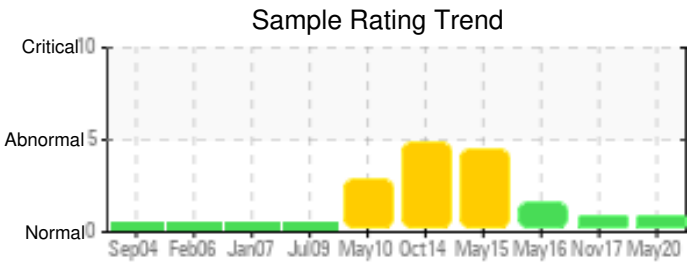
PETRO-CANADA LUBRICANTS





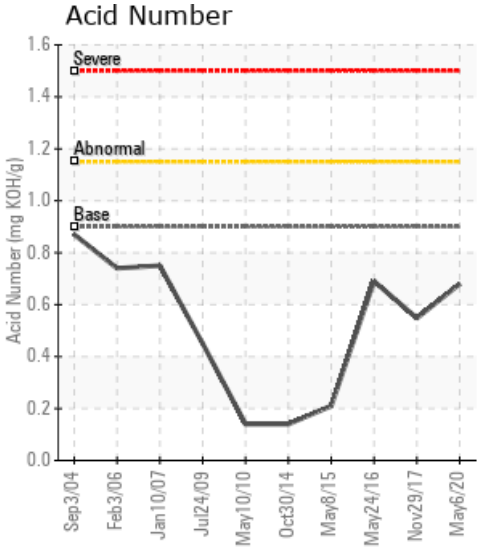
WANSON

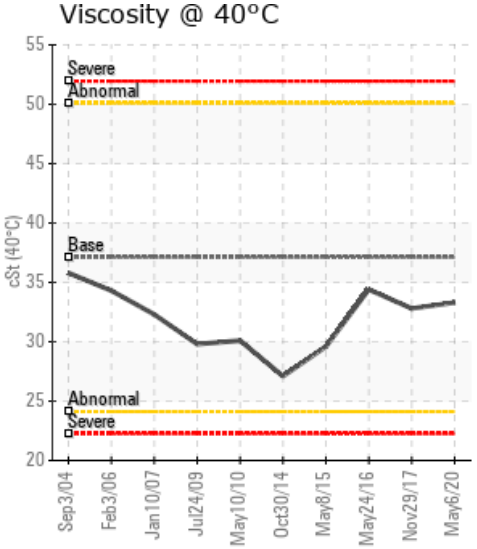
Customer: PTRHTF40018	System Information	Sample Information
KRAMER FISH BV MIDDELGRONDEN 1 FLEVOLAND URK, FLE NETHERLANDS Attn: Maintenance Manager Tel: E-Mail:	System Volume: 1000 ltr Bulk Operating Temp: 275F / 135C Heating Source: Blanket: Fluid: PETRO CANADA PURITY FG HEAT TRANSFER FLUID Make: WANSON	Lab No: 02359043 Analyst: Matthias Voss Sample Date: 05/06/20 Received Date: 06/11/20 Completed: 06/23/20 Matthias Voss Matthias.Voss@petrocanadalsp.com

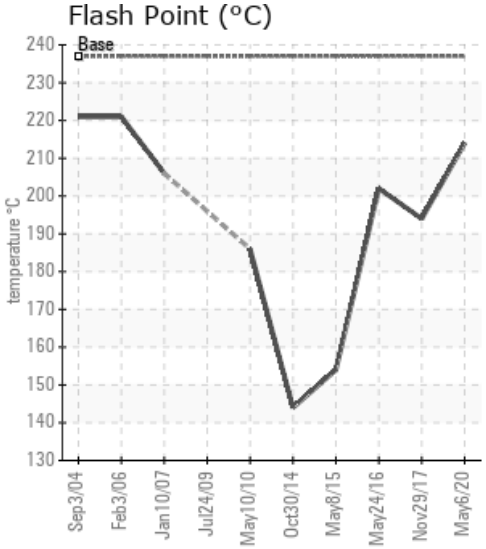
Recommendation:

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	%
05/06/20	06/11/20	5y		417 / 214	25.6	33.3	0.68	0.072	711 / 377	811 / 433	914 / 490	2.13
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
Baseline Data				459 / 237		37.12	0.90		721 / 383	807 / 431	892 / 478	1.5







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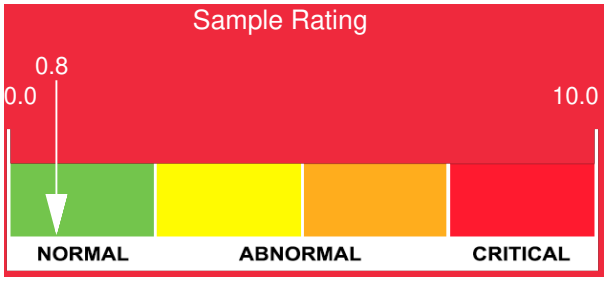
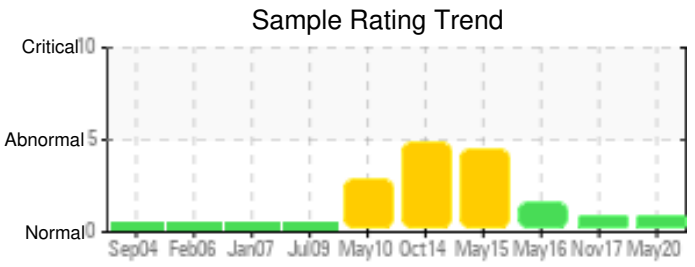
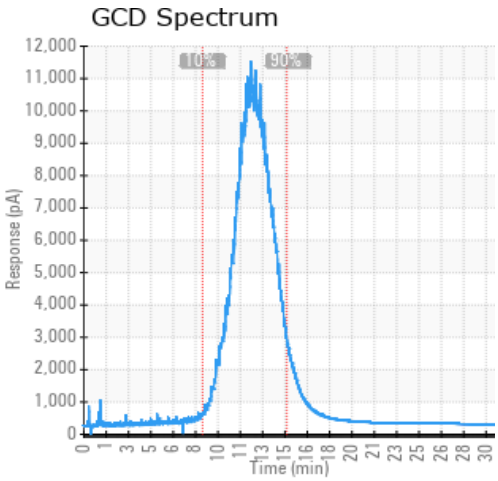
PETRO-CANADA LUBRICANTS

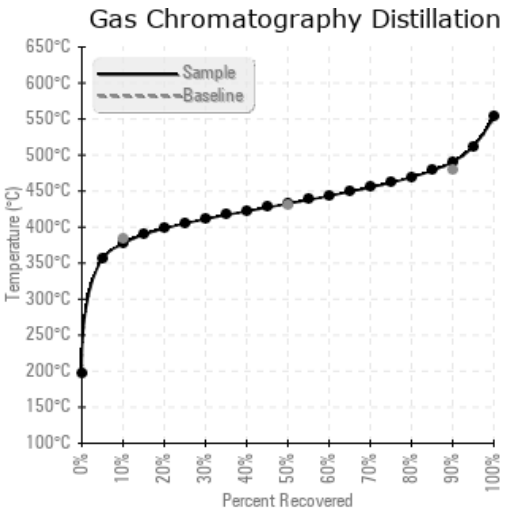


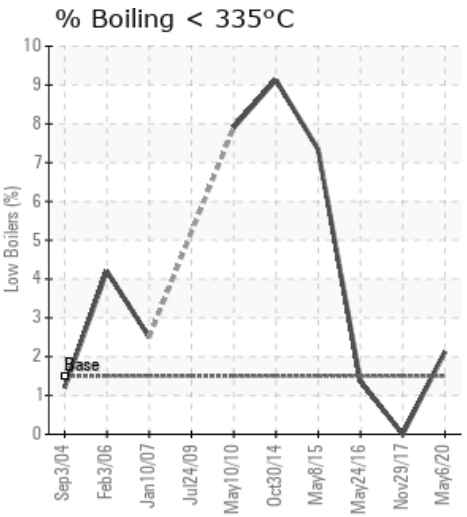


Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
05/06/20	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	1
11/29/17	57	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	1
05/24/16	9	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	32	0
05/08/15	5	0	0	0	0	0	0	0	0	0	0	0	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
Baseline Data			0	0						0			0	0				0	0				230	

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







Historical Comments

11/29/17	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 COC Flash Point is marginally low.
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.

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