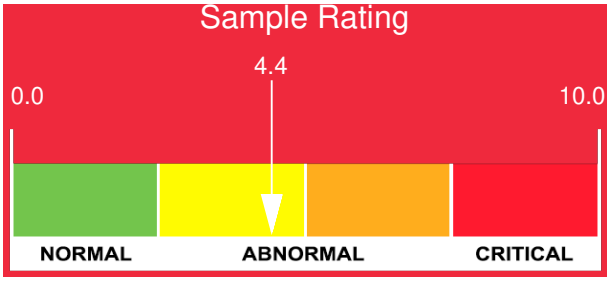
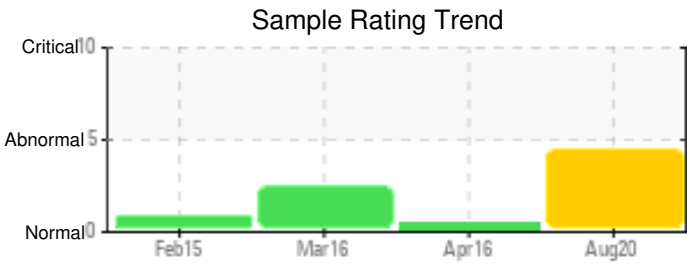




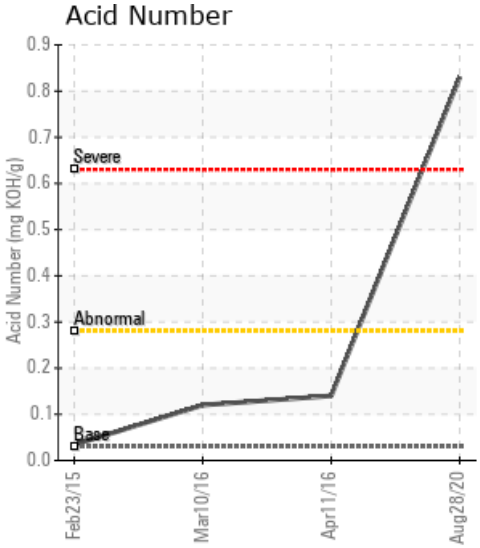
KONUS

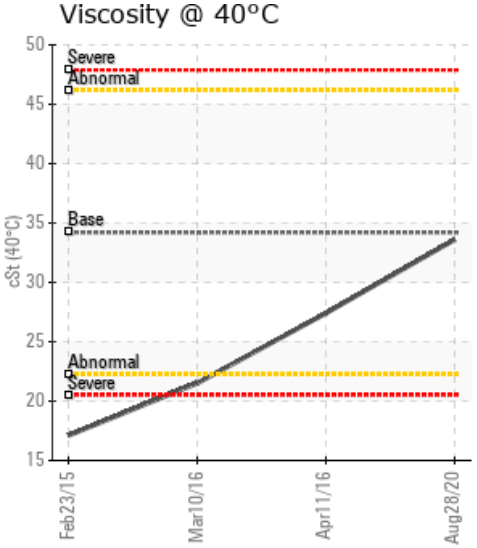
Customer: PTRHTF40118	System Information	Sample Information
Alumimium & Chemie Rotterdam B.V. Oude Maasweg 80 Botlek Rotterdam, 3197 KJ Netherlands Attn: Wilbert Snijers Tel: E-Mail: w.snijers@klt.nl	System Volume: 12000 ltr Bulk Operating Temp: 563F / 295C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: KONUS	Lab No: 02375854 Analyst: Matthias Voss Sample Date: 08/28/20 Received Date: 09/15/20 Completed: 09/21/20 Matthias Voss Matthias.Voss@petrocanadalsp.com

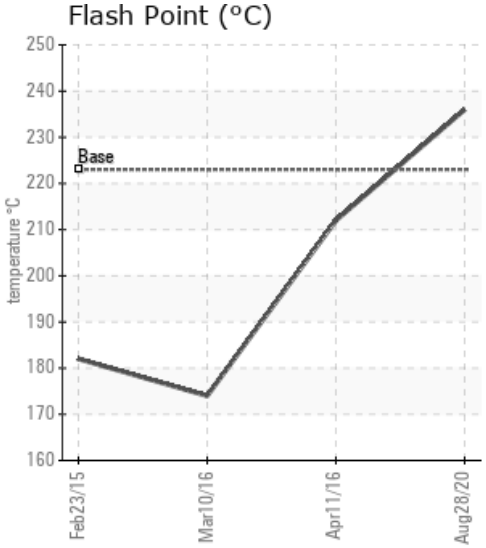
Recommendation: Possible contamination (Top up) with different, not suitable fluid. Try to figure out reason for abnormal high TAN and Zinc parameters. Other properties are in a proper manner and if differing values are explainable, fluid is suitable for further use.

Comments: Acid Number (AN) is severely high. Zinc ppm levels are severely high.

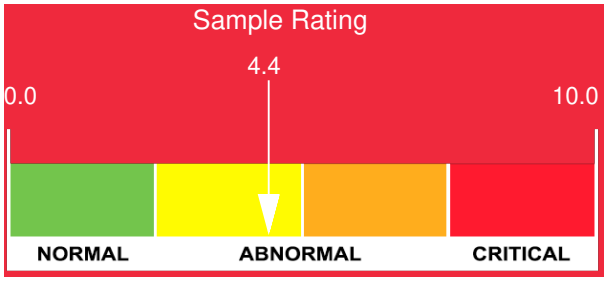
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
08/28/20	09/15/20	54m		457 / 236	71.8	33.6	0.83	0.216	719 / 382	810 / 432	906 / 485	1.43
04/11/16	04/20/16	4m	PTRHTF40118	414 / 212	5.9	27.4	0.14	0.039	675 / 357	789 / 420	894 / 479	3.20
03/10/16	04/20/16	3m	PTRHTF 40118	345 / 174	23.1	21.5	0.12	0.030	645 / 341	771 / 411	879 / 470	6.90
02/23/15	03/05/15	0m		360 / 182	31.6	17.1	0.034	0.024	639 / 337	717 / 381	806 / 430	8.18
Baseline Data				433 / 223		34.2	0.03		720 / 382	817 / 436	900 / 482	1.00

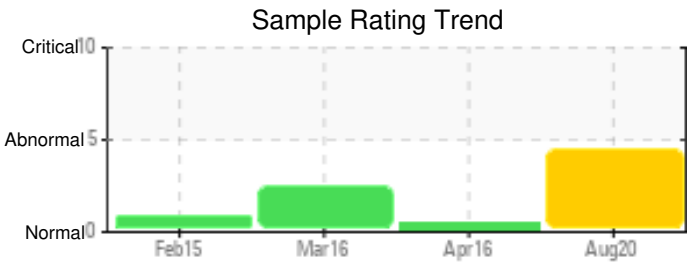






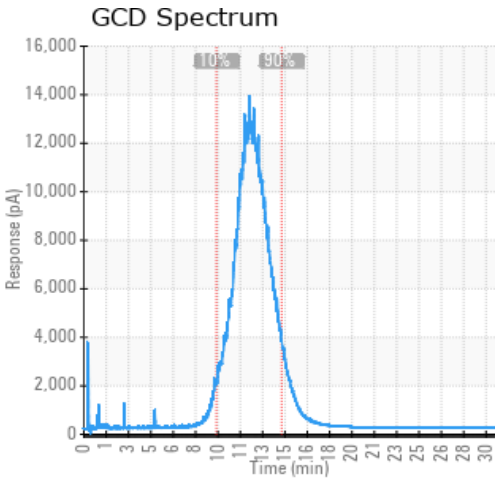
PETRO-CANADA LUBRICANTS

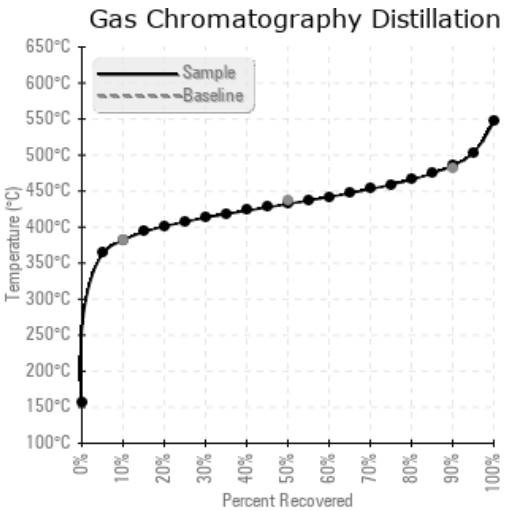


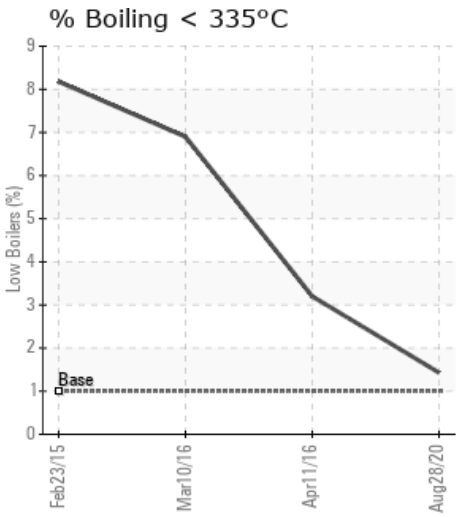


Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
08/28/20	21	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	42	121
04/11/16	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	5	0	123	2
03/10/16	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
02/23/15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baseline Data			0	0						0			0	0					0				0	

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







Historical Comments

04/11/16	Oil appears to be in good condition and fit for further use.Sample at next scheduled maintenance interval.
03/10/16	Oil is fit for further service.Sample at next scheduled maintenance interval. COC Flash Point is abnormally low. (GCD) 10% Distillation Point is abnormally low. (GCD) 90% Distillation Point is marginally low.
02/23/15	Resample at the next service interval to monitor. NOTE: Sample is more than 1 year old and was never completed. Closing out in LIMS system. There is no indication of any contamination in the fluid. The condition of the fluid is suitable for further service.