

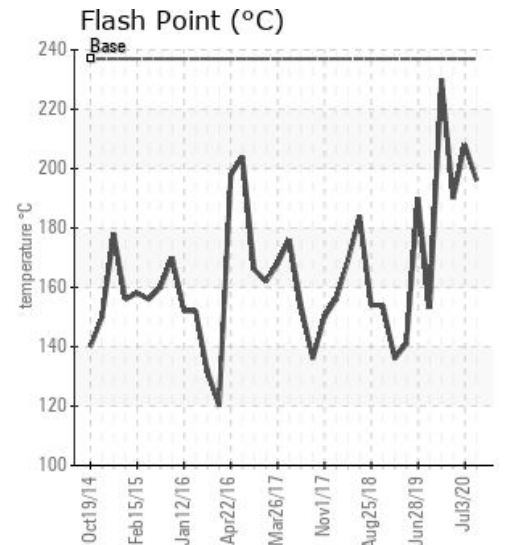
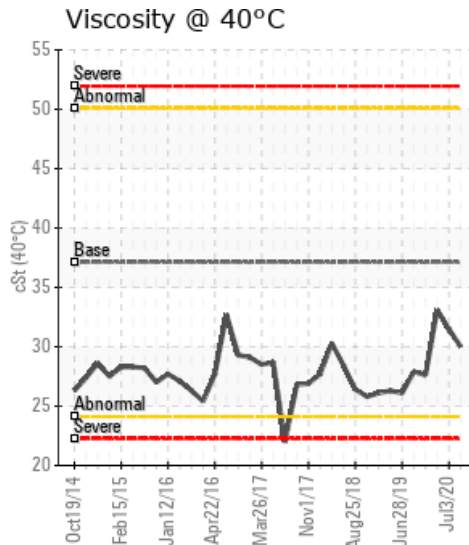
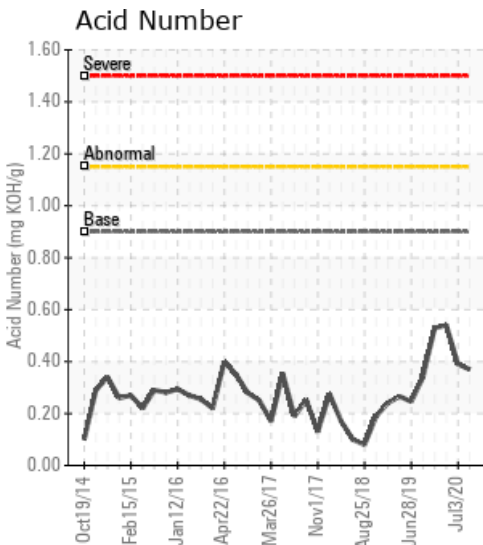
[THAILAND] CARGILL SUPPLY AND RETURN

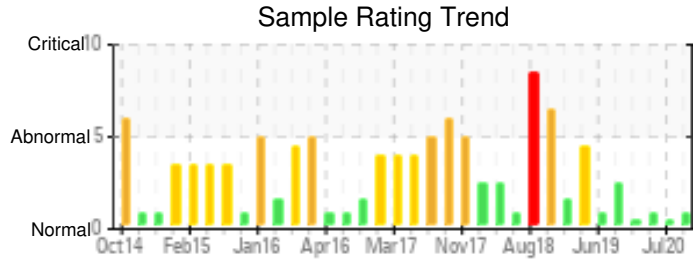
Customer: PTRHTF60010	System Information	Sample Information
SYNLUBE INTERNATIONAL CO LTD 76/1 MOO.7 THACHIN MUANG SAMUTSAKHON, 74000 THAILAND Attn: CHERNPORN CHOBKUI Tel: 034421290 E-Mail: chernporn@synlube.co.th	System Volume: 11275 ltr Bulk Operating Temp: 554F / 290C Heating Source: Blanket: Fluid: PETRO CANADA PURITY FG HEAT TRANSFER FLUID Make: WANSON	Lab No: 02386374 Analyst: Philip Riley Sample Date: 10/27/20 Received Date: 11/10/20 Completed: 11/13/20 Philip Riley philip.riley@petrocanadalsp.com

Recommendation: Flash Point marginally low and some evidence of light end fluid cracking that would create low boiling point products to explain that. If the system can be safely vented then please look to do this. All other parameters are as expected and fluid fit for further use. Please re-sample at normal frequency

Comments: COC Flash Point is marginally low.

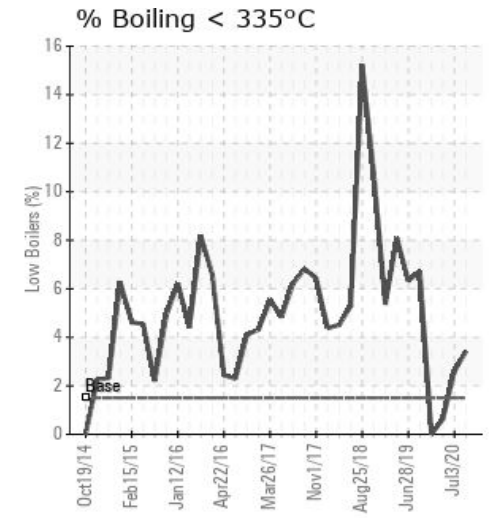
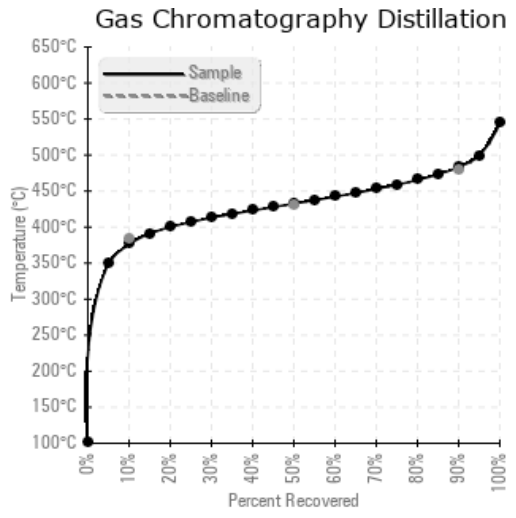
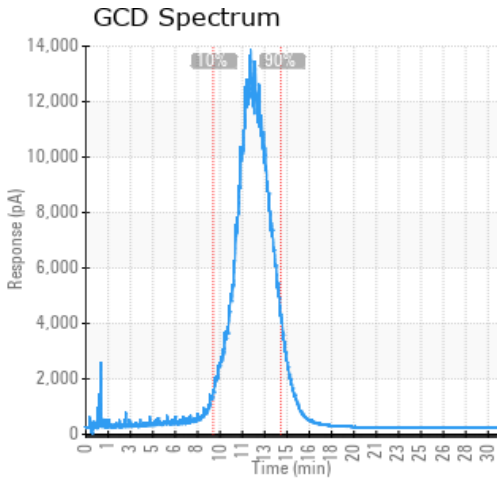
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
10/27/20	11/10/20	10m		385 / 196	8.0	30.0	0.37	0.084	709 / 376	811 / 433	902 / 483	3.43
07/03/20	07/14/20	6m		406 / 208	9.6	31.5	0.39	0.044	717 / 380	813 / 434	904 / 485	2.60
04/06/20	04/14/20	3m	SUPPLY AND RETURN	374 / 190	13.0	33.1	0.54	0.181	727 / 386	814 / 434	902 / 484	0.64
01/14/20	01/30/20	10m		446 / 230	0.2	27.6	0.529	0.077	734 / 390	802 / 428	892 / 478	0.00
10/12/19	10/25/19	42m	SUPPLY/RETURN	307 / 153	13.3	27.9	0.340	0.086	666 / 352	788 / 420	883 / 473	6.73
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
10/27/20	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0
07/03/20	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0
04/06/20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	1
01/14/20	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0
10/12/19	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0
Baseline Data			0	0						0			0	0				0	0				230	

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



Historical Comments

07/03/20	Fluid meets all criteria as expected and fit for further use. Please sample again at normal frequency
04/06/20	All parameters test to specification with the exception of the COC Flash Pt which is marginally low. The fluid remains suitable for operation, but recommend safe venting if possible to remove the low boiling point molecules. Please re-sample after normal frequency COC Flash Point is abnormally low.
01/14/20	Oil tests to spec and all parameters as expected. Fit for further use and re-sample at normal frequency
10/12/19	Strong evidence of cracking indicated by the lowering viscosity and the low flash point. This looks to have been recovered in the past and if safe to do so the system must be vented. Distillation points remain mainly in line with fresh fluid. Please vent the system and take another sample to check how the system has recovered from removal of the light end molecules COC Flash Point is severely low. (GCD) 10% Distillation Point is marginally low.

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