

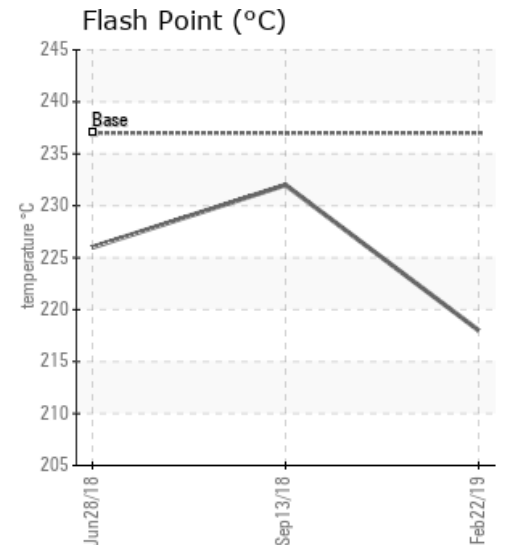
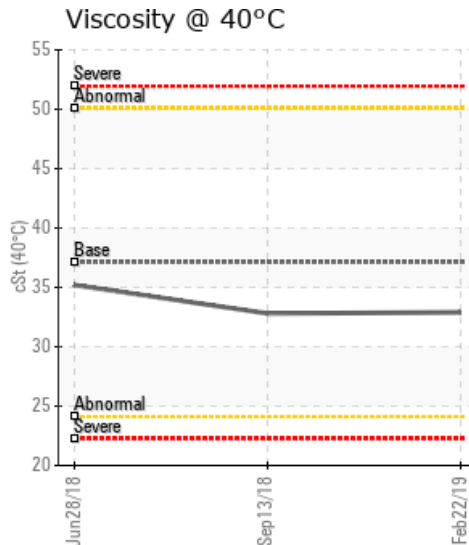
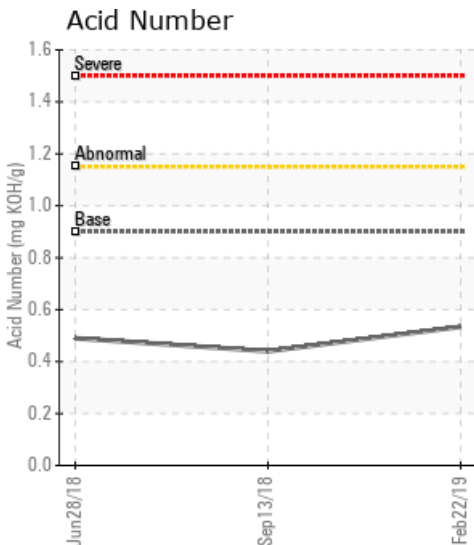
KORAT (THAILAND) - RETURN - FUTHER1

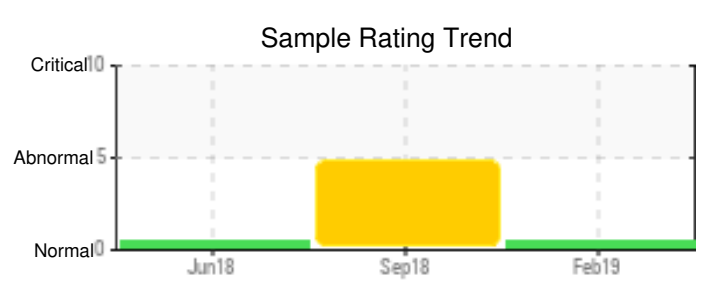
Customer: PTRHTF60010	System Information	Sample Information
SYNLUBE INTERNATIONAL CO LTD 76/1 MOO.7 THACHIN MUANG SAMUTSAKHON, 74000 THAILAND Attn: CHERNPORN CHOBKUI Tel: 034421290 E-Mail: chernporn@synlube.co.th	System Volume: 20910 ltr Bulk Operating Temp: 554F / 290C Heating Source: Blanket: Fluid: PETRO CANADA PURITY FG HEAT TRANSFER FLUID Make: HAVOL	Lab No: 02272140 Analyst: Yutong Gao Sample Date: 02/22/19 Received Date: 03/08/19 Completed: 03/21/19

Recommendation: The current fluid has normal flash point, adequate oil viscosity and GCD distillation points. The contaminants such as water, dirt or other solid particles are all low. Please continue to run the fluid and take one sample in 12 months.

Comments:

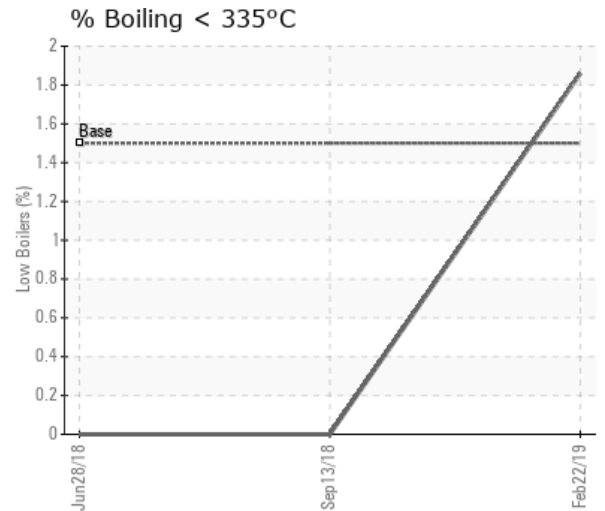
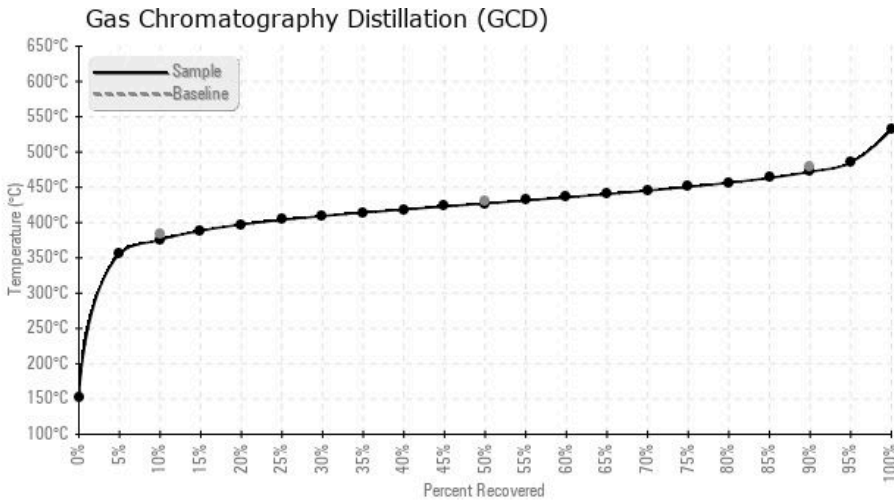
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
02/22/19	03/08/19	0m		424 / 218	10.9	32.9	0.534	0.052	708 / 376	801 / 427	882 / 472	1.86
09/13/18	10/02/18	6m		450 / 232	1912.3	32.8	0.44	0.057	729 / 387	804 / 429	885 / 474	0.00
06/28/18	07/13/18	0m	RETURN	439 / 226	2.4	35.2	0.49	0.031	728 / 387	797 / 425	886 / 475	0.00
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
02/22/19	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0
09/13/18	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0
06/28/18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	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	
09/13/18	The current fluid has normal viscosity, flash point and TAN. The solid content is also very low. However, the water level is very high, even though there are no safety concerns, I still recommend to trouble-shoot how the large amount of the water went into the system. Or the sample was just a bad sample. Please make sure to flush the sampling line/port well before taking the real samples next time. Please continue to run this fluid and take one sample in 6 months.
06/28/18	The current fluid (with 8 months operation) has a normal viscosity, flash point, acid number and distillation points. There is minimum solid or water in the fluid. Please continue to run the fluid and take a sample in 12 months.

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