

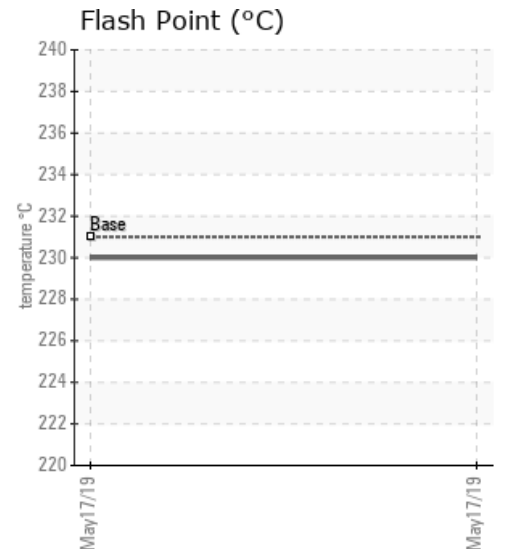
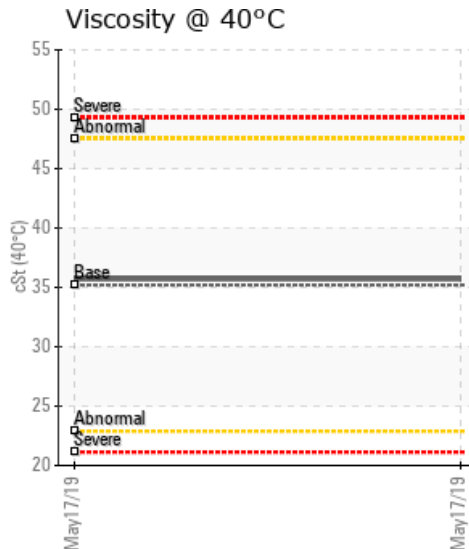
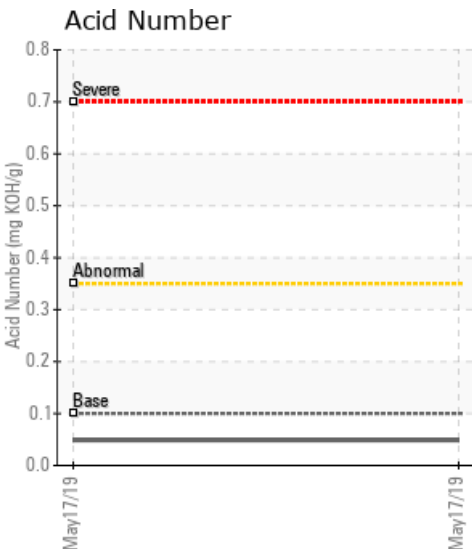
EIAM E-SAN (PLANT 4-NEW PLANT) SUPPLY AND RETURN

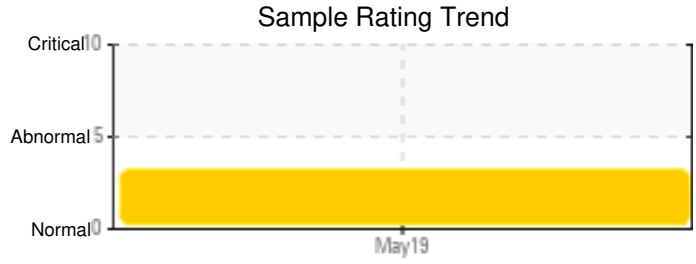
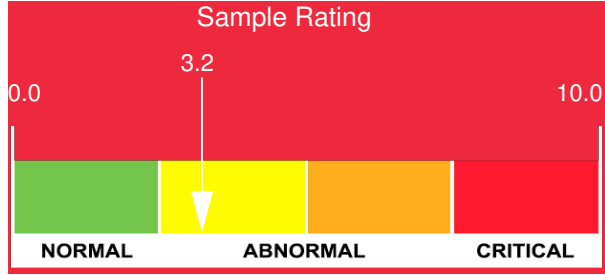
Customer: PTRHTF60010	System Information	Sample Information
SYNLUBE INTERNATIONAL CO LTD 76/1 MOO.7 THACHIN MUANG SAMUTSAKHON, 74000 THAILAND Attn: CHERNPORN CHOBKUI Tel: 034421290 E-Mail: chernporn@synlube.co.th	System Volume: 12300 ltr Bulk Operating Temp: 482F / 250C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO HTF Make:	Lab No: 02287276 Analyst: Yutong Gao Sample Date: 05/17/19 Received Date: 05/27/19 Completed: 05/30/19

Recommendation: The current fluid has normal viscosity, adequate flash point and the distillation points. The acid number is extremely low meaning there is no any signs of oxidation. The solid content is minimum. However, the fluid is contaminated by water. The 0.2% (or 1813ppm) water content is considered severe. Please trouble-shoot how the water enters into the heat transfer system. If it is a brand new plant, the whole system need to be cleaned and dried thoroughly before filling up the heat transfer fluid.

Comments: Water contamination levels are severely high.

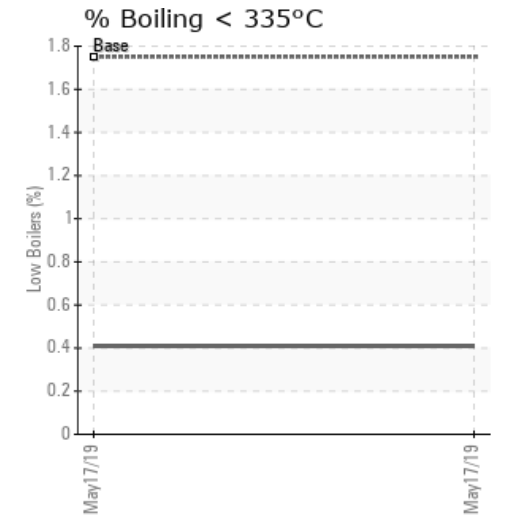
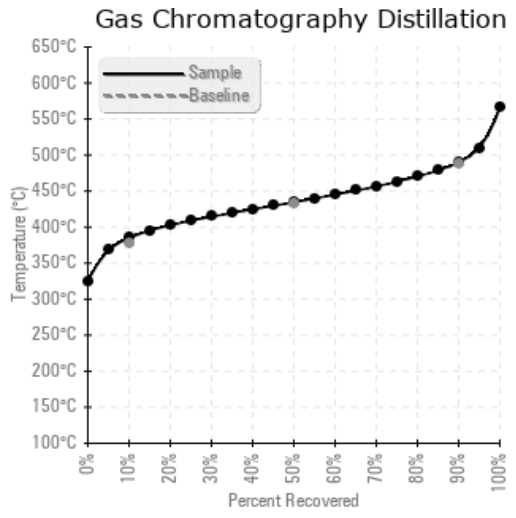
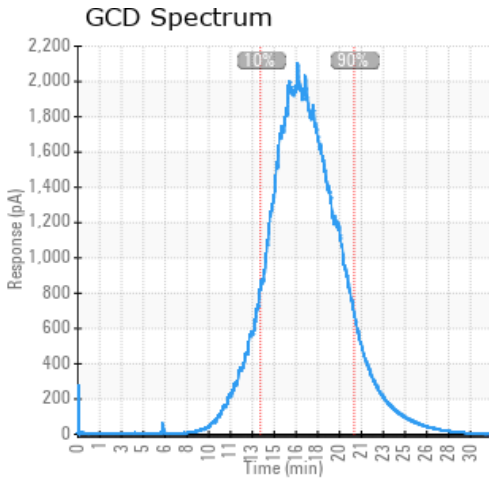
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
05/17/19	05/27/19	0h	SUPPLY AND RETURN	446 / 230	1813.8	35.7	0.049	0.052	724 / 385	814 / 435	914 / 490	0.41
Baseline Data				448 / 231		35.20	.1		712 / 378	810 / 432	910 / 488	1.75





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
05/17/19	44	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	2	0	232	0
Baseline Data				0	0					0		0	0					0					280	

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



Historical Comments

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