



## TOH PLANT 1

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: 100000 ltr Bulk Operating Temp: 662F / 350C Heating Source: Blanket: Fluid: PTT HITEMP 500 Make:	Lab No: 02270304 Analyst: Yutong Gao Sample Date: 01/25/19 Received Date: 02/27/19 Completed: 03/19/19

Recommendation: Please confirm the fluid bulk temperature. The 350C in this report might not be correct. PTT Hitemp 500 fluid has a rating of 260C as maximum bulk temperature. The current fluid has experienced the high oxidation degradation (high acid number) and thermal degradation as well over the 8 years operation. The high acid material typically increases the system corrosion. The high solid content of 3.31% indicates that the system might be deposited by the black carbon or fouled by the other oxidation by-products. Please identify an opportunity to do the system inspection. The fluid change and system cleaning might be considered in the near future.

Comments: Solid levels are severely high. Acid Number (AN) is high. (GCD) 90% Distillation Point is low. (GCD) 10% Distillation Point is high. Water contaminant is normal.

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	%
01/25/19	02/27/19	8y	TOH 2	421 / 216	49.0	44.9	1.98	3.31	719 / 382	796 / 424	868 / 465	0.52
Baseline Data				414 / 212		30.42			691 / 366	797 / 425	903 / 484	3.8



