

## [SYNLUBE (THAILAND)] FOOD FOR THE WORLD

**Customer: PTRHTF60010**  
 SYNLUBE INTERNATIONAL CO LTD  
 76/1 MOO.7 THACHIN  
 MUANG SAMUTSAKHON, 74000 TH  
 Attn: CHERNPORN CHOBKUI  
 Tel: 034421290  
 E-Mail: chernporn@synlube.co.th

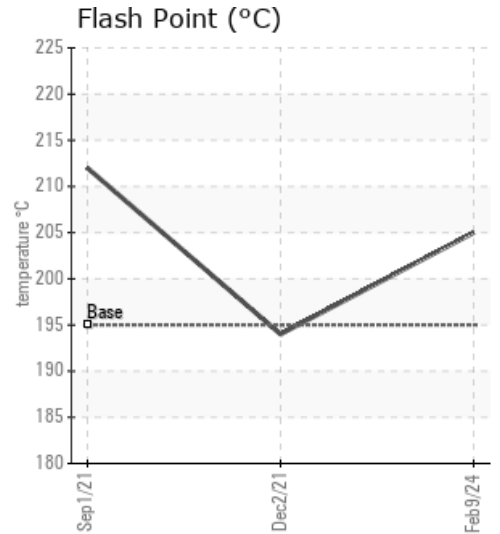
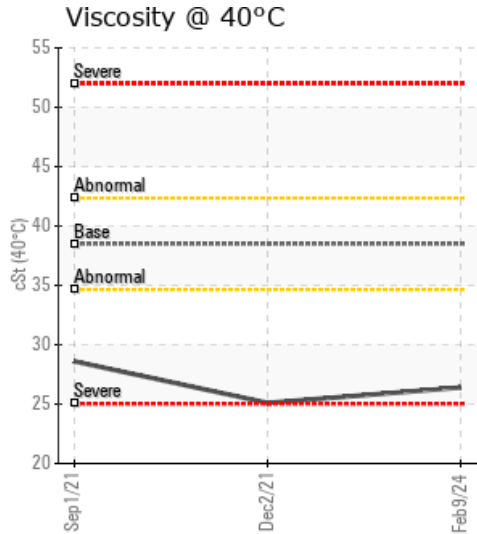
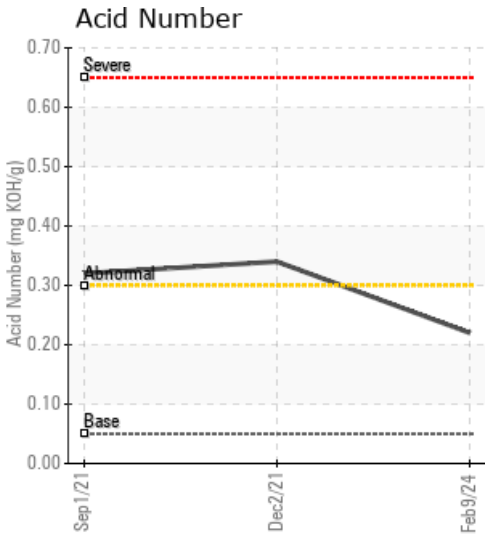
**System Information**  
 System Volume: 20000 ltr  
 Bulk Operating Temp: 527F / 275C  
 Heating Source:  
 Blanket:  
 Fluid: SHELL HEAT TRANSFER OIL S2  
 Make: HOVEL

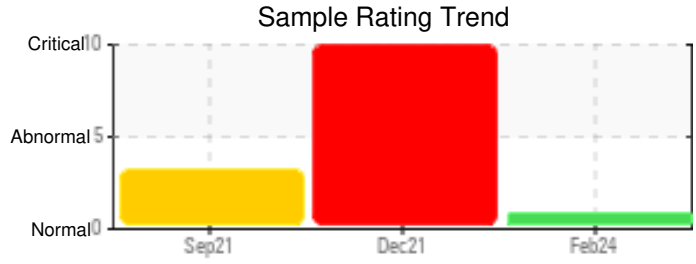
**Sample Information**  
 Lab No: 02618532  
 Analyst: Bill Quesnel CLS,OMA II,MLA-III,LLA-I  
 Sample Date: 02/09/24  
 Received Date: 02/27/24  
 Completed: 03/05/24  
 Bill Quesnel CLS,OMA II,MLA-III,LLA-I

Recommendation: The fluid is suitable for further service. Resample at the next service interval to monitor.

Comments: (GCD) 90% Distillation Point is marginally low.

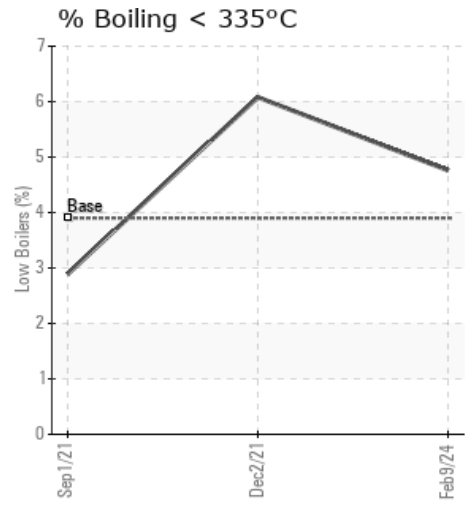
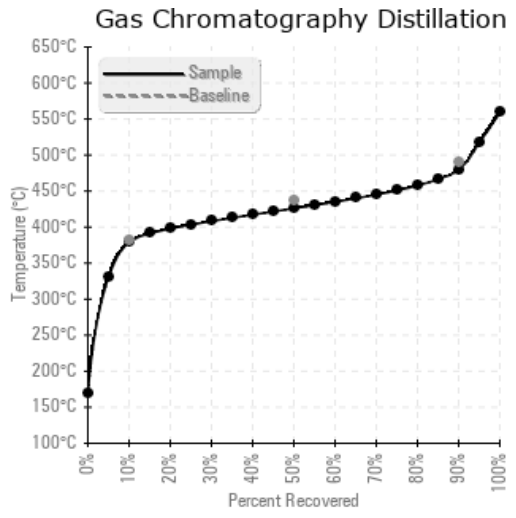
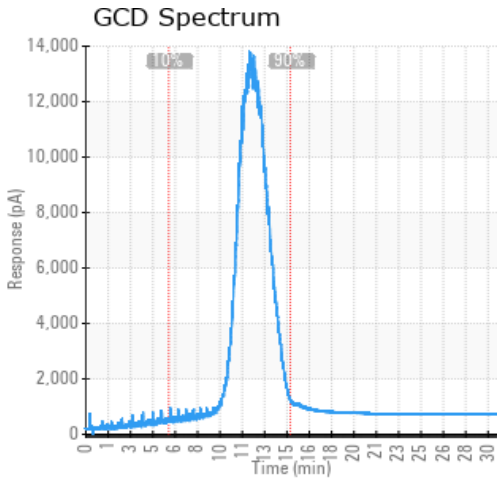
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
02/09/24	02/27/24	144.0m		401 / 205	37	26.4	0.22	0.273	715 / 379	799 / 426	895 / 479	4.76
12/02/21	12/21/21	48.0m		381 / 194	6654.4	25.1	0.34	0.594	696 / 369	791 / 422	872 / 466	6.08
09/01/21	10/06/21	36.0m		414 / 212	44.7	28.6	0.32	0.208	725 / 385	798 / 425	874 / 468	2.89
Baseline Data				383 / 195		38.5	0.05		718 / 381	819 / 437	914 / 490	3.9





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
02/09/24	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/02/21	22	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	2	0	0	0	3	2
09/01/21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Baseline Data			0	0						0			0	0					0				0	

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



### Historical Comments

12/02/21	Not familiar with the chemistry of the Shell product. However, water level is extremely high and needs to be removed. Source of water ingress should be identified and rectified. Longer term I would expect the water to cause operational issues, acid increase, oxidation and corrosion within the system. Recommend an oil change, clean, flush and refill with CALFLO AF (most likely) but would discuss system conditions to best scope out product ppm Water contamination levels are severely high. Water contamination levels are severely high. Water contamination levels are severely high. Pentane Insolubles levels are severely high. (GCD) 90% Distillation Point is severely low. Acid Number (AN) is abnormally high.
09/01/21	Competitor Fluid so do not have full visibility of parameters. Acid number raises some concern as this will trigger the degradation of the fluid. (GCD) 90% Distillation Point is severely low. Acid Number (AN) is abnormally high.

Petro-Canada makes no representation or warranty of any kind, either express or implied, as to the accuracy or completeness of the analysis and assumes no responsibility and shall have no liability whatsoever with respect to such analysis, or a party's use of it. Petro-Canada is a division of HollyFrontier Corporation.