

## PAPIOCA DEVELOPMENT CORP

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

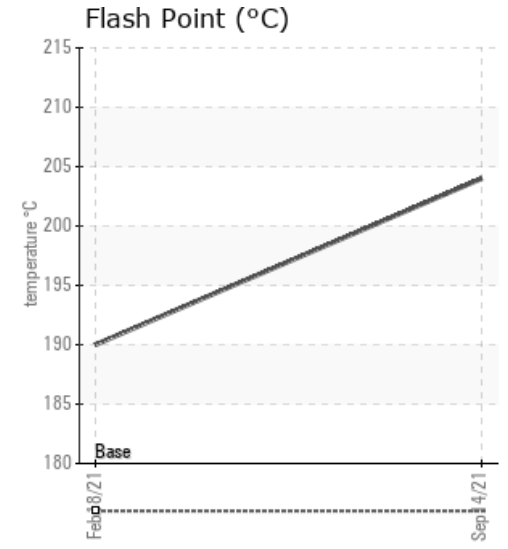
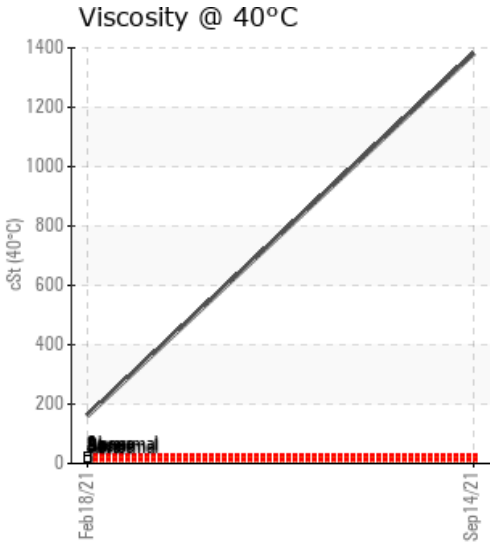
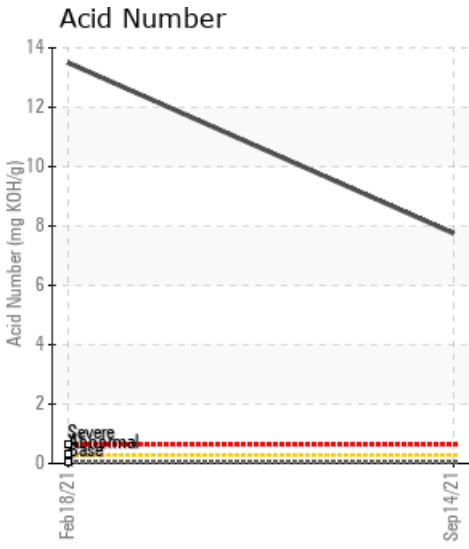
**System Information**  
 System Volume: 6500 ltr  
 Bulk Operating Temp: 302F / 150C  
 Heating Source:  
 Blanket:  
 Fluid: EASTMAN THERMINOL 55  
 Make: SCHERRER

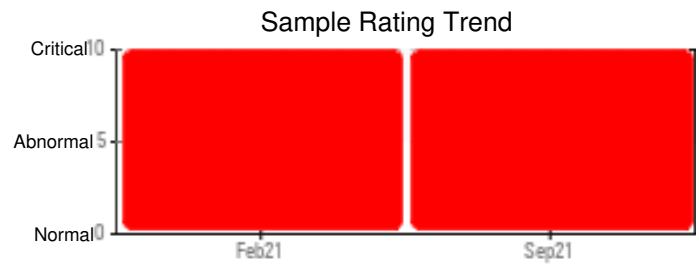
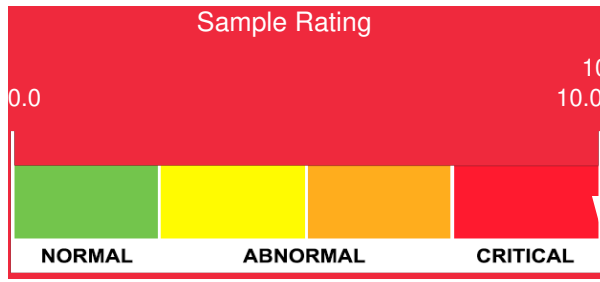
**Sample Information**  
 Lab No: 02453402  
 Analyst: Bill Quesnel CLS,OMA II,MLA-III,LLA-I  
 Sample Date: 09/14/21  
 Received Date: 11/02/21  
 Completed: 11/04/21  
 Bill Quesnel CLS,OMA II,MLA-III,LLA-I

Recommendation: This is not a Petro-Canada Lubricants product, however, as can clearly be seen there needs to be an immediate fluid change, part of which must be a clean and flush. Acidity is extremely high, as is the water content, viscosity and insoluble matter. There is also visible debris which clearly shows a breakdown in the system. As part of the change there needs to be an investigation into what has happened to prevent recurrence. It also provides opportunity to move to a product such as CALFLO AF, but in order to best recommend a Petro-Canada product we would need system conditions. In summary, you must do an oil change including clean and flush. Replace with Petro-Canada CALFLO product, and investigate the source of the water and the metal debris in the oil

Comments: Iron ppm levels are severe. PQ levels are severe. Water contamination levels are severely high. Water contamination levels are severely high.. ppm Water contamination levels are severely high. Pentane Insolubles levels are severely high. Acid Number (AN) is severely high. Visc @ 40°C is severely high. (GCD) % < 335°C is marginally high.

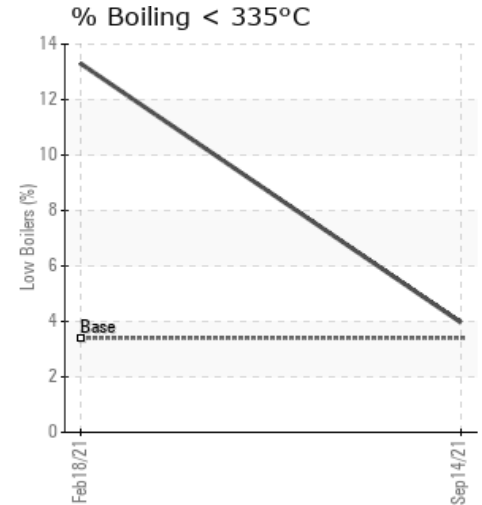
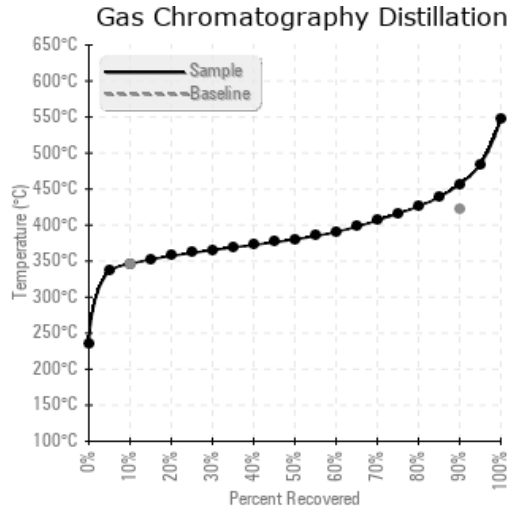
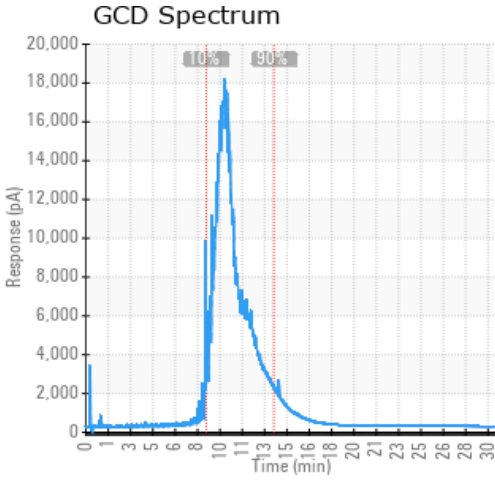
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
09/14/21	11/02/21	22.0y	FILTER NO 8	399 / 204	294.1	1381	7.75	7.21	655 / 346	716 / 380	854 / 457	3.96
02/18/21	02/26/21	21.0y	Return	374 / 190	65881.1	161	13.5	9.88	602 / 317	698 / 370	802 / 428	13.30
Baseline Data				349 / 176		19.0	0.03		655 / 346		790 / 421	3.40





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
09/14/21	2051	4	0	0	2	0	0	0	0	0	2	0	0	0	0	0	5	0	2	0	2	0	50	6
02/18/21	1883	2	0	0	2	0	0	0	0	0	3	1	2	0	0	0	8	0	6	0	4	0	0	6
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

02/18/21	This is not a Petro-Canada Lubricants product, however, as can clearly be seen there needs to be an immediate fluid change, part of which must be a clean and flush. Acidity is extremely high, as is the water content, viscosity and insoluble matter. There is also visible debris which clearly shows a breakdown in the system. As part of the change there needs to be an investigation into what has happened to prevent recurrence. It also provides opportunity to move to a product such as CALFLO AF, but in order to best recommend a Petro-Canada product we would need system conditions. In summary, you must do an oil change including clean and flush. Replace with Petro-Canada CALFLO product, and investigate the source of the water and the metal debris in the oil iron ppm levels are severe. PQ levels are severe. Water contamination levels are severely high. Water contamination levels are severely high. ppm Water contamination levels are severely high. Pentane Insolubles levels are severely high. Acid Number (AN) is severely high. Visc @ 40°C is severely high. (GCD) % < 335°C is marginally high.

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