

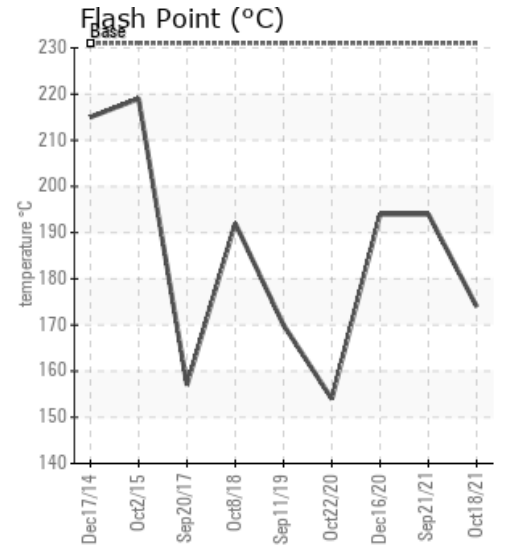
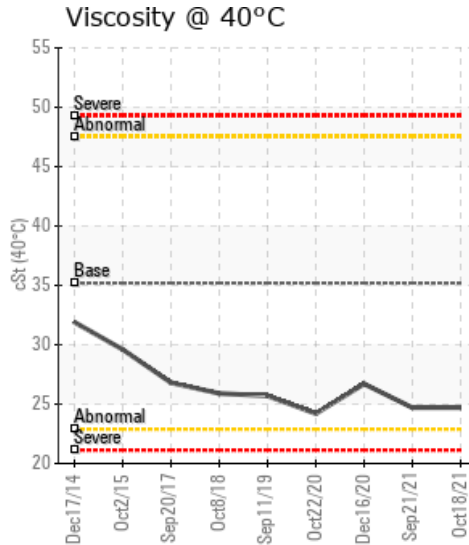
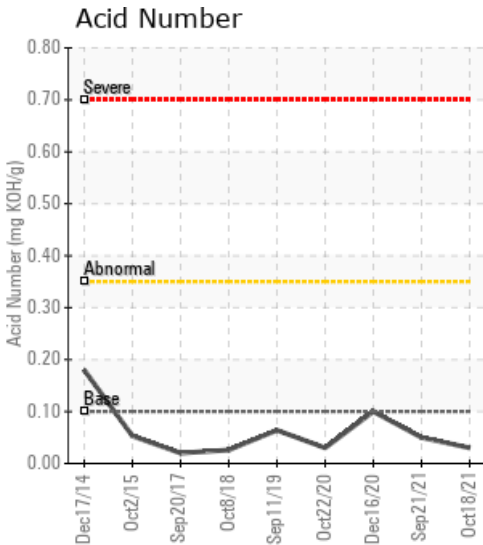
HOT OIL

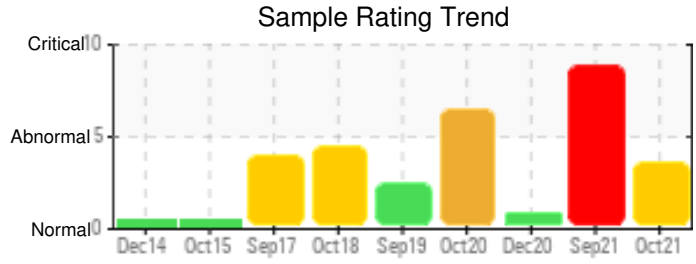
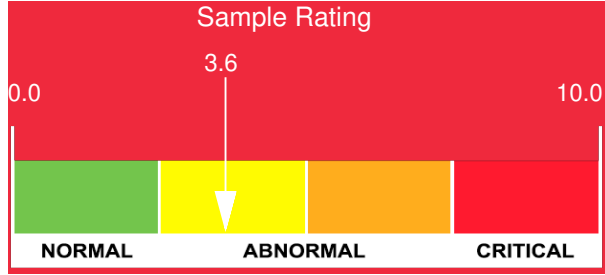
Customer: PTRHTF10002	System Information	Sample Information
EVONIK 3305 26th ST LOS ANGELES, CA USA Attn: Prakash Mehta Tel: (818)709-0492 E-Mail: purelubricants@earthlink.net	System Volume: 1500 gal Bulk Operating Temp: 600F / 316C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO HTF Make:	Lab No: 02452567 Analyst: Ron LeBlanc Sample Date: 10/18/21 Received Date: 10/28/21 Completed: 11/02/21 Ron LeBlanc Ronald.LeBlancSr@hollyfrontier.com

Recommendation: The oil typicals have returned to somewhat normal compared to the previous sample. Pentane insolubles indicate some contamination. Water content dropped significantly. Adding a small amount of new oil could improve the typicals significantly.

Comments: COC Flash Point is abnormally low. (GCD) % < 335°C is marginally high. (GCD) 10% Distillation Point is marginally low.

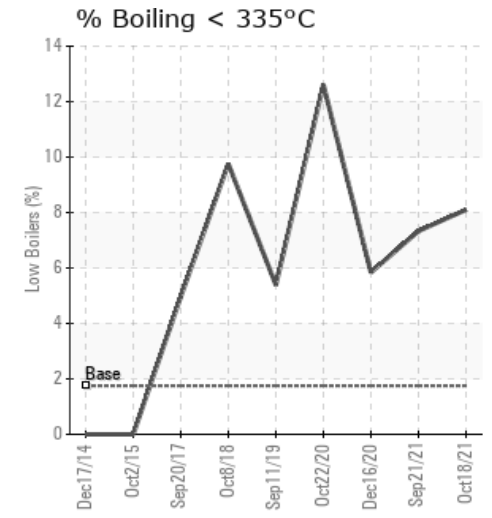
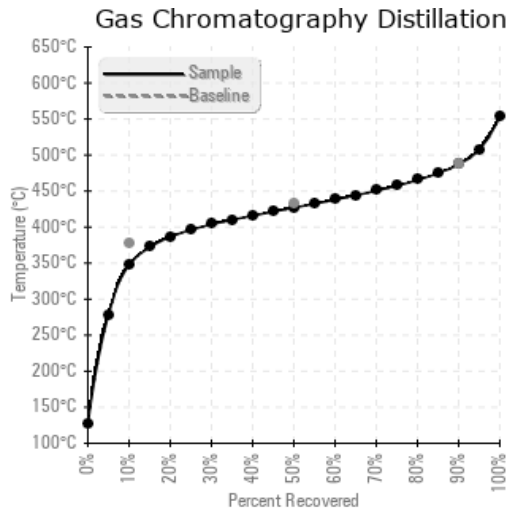
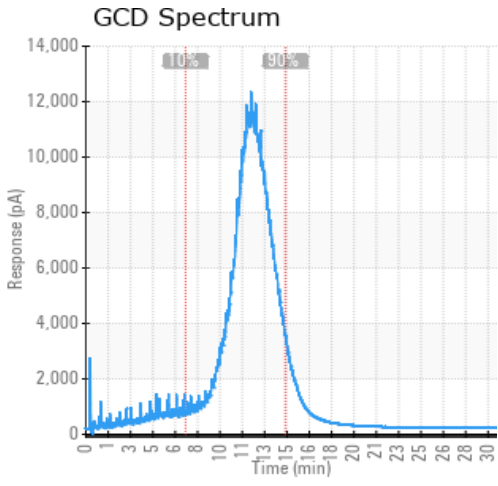
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
10/18/21	10/28/21	0.0y		345 / 174	16.5	24.7	0.03	0.163	658 / 348	800 / 427	909 / 487	8.10
09/21/21	10/05/21	1.0y		381 / 194	1552.3	24.7	0.05	0.068	667 / 353	801 / 427	908 / 487	7.33
12/16/20	01/07/21	0.0y		381 / 194	23.7	26.7	0.10	0.054	685 / 363	805 / 430	912 / 489	5.84
10/22/20	10/29/20	1.0y		309 / 154	18.6	24.2	0.03	0.065	580 / 304	773 / 412	881 / 472	12.61
09/11/19	09/20/19	0.0y		338 / 170	18.8	25.7	0.064	0.048	683 / 362	799 / 426	888 / 476	5.39
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
10/18/21	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0
09/21/21	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0
12/16/20	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	0
10/22/20	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0
09/11/19	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0
Baseline Data			0	0						0			0	0				0	0				280	

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



Historical Comments

09/21/21	The water is Extremely high in the sample. The COC Flash point is low although it has come up in the last two samples. The sample appears normal other than the two items listed. ppm Water contamination levels are severely high. Water contamination levels are severely high. COC Flash Point is marginally low.
12/16/20	COC Flash Point is marginally low. Recommend venting off low boilers.
10/22/20	Distillation and flash points very low. Carefully vent off the low boilers and resample. (GCD) 10% Distillation Point is severely low. COC Flash Point is severely low. (GCD) % < 335°C is abnormally high. (GCD) 90% Distillation Point is abnormally low.
09/11/19	The flash point is severely low. Vent the volatile components off to raise the COC flash point. Check the heater and determine if it is overheating the heat transfer fluid during the heating cycle. COC Flash Point is severely low. (GCD) 90% Distillation Point is marginally low.

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