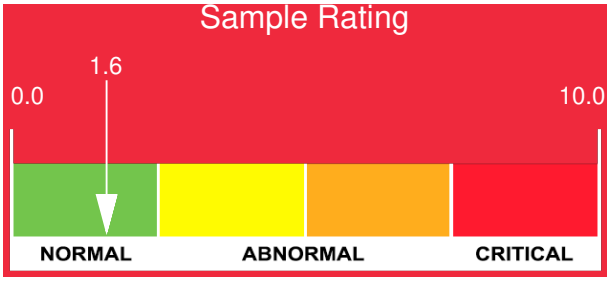
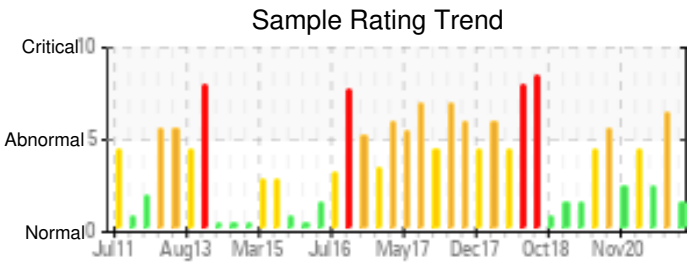




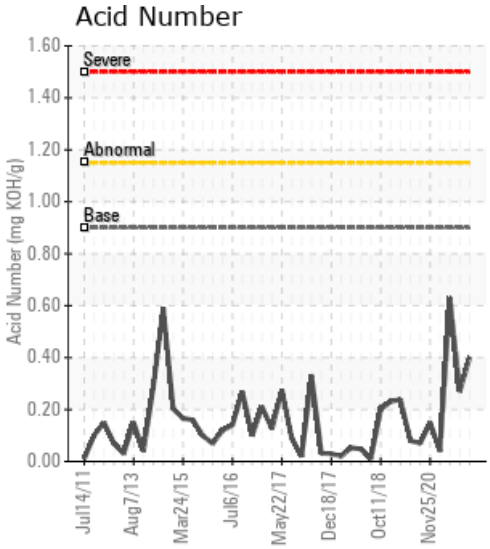
WEST HOT OIL SYSTEM

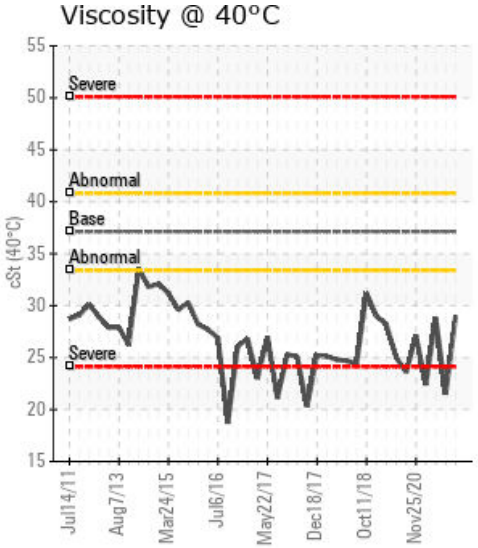
Customer: PTRHTF10004	System Information	Sample Information
ADM VITAMIN E PLANT 3700 EAST DIVISION STREET DECATUR, IL 62526 USA Attn: Rian Campbell Tel: (217)451-7770 E-Mail: rian.campbell@adm.com	System Volume: 2200 gal Bulk Operating Temp: 550F / 288C Heating Source: Blanket: Fluid: PETRO CANADA PURITY FG HEAT TRANSFER FLUID Make: AMERICAN	Lab No: 02537683 Analyst: Yvette Trzcinski Sample Date: 01/26/23 Received Date: 02/06/23 Completed: 02/08/23 Yvette Trzcinski yvette.trzcinski@HFSinclair.com

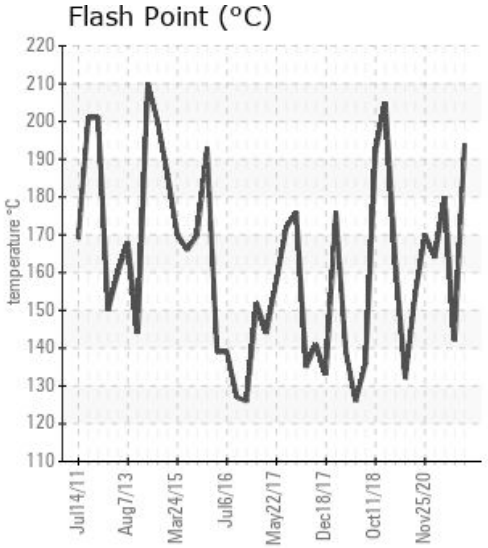
Recommendation: Looks like system was changed from last sample - viscosity has increased seeing some light boilers which are lower viscosity due to degradation from the fluid which also lowers the flash point but all parameters are in acceptable levels. Resample in 4-6 months to monitor fluid condition

Comments:

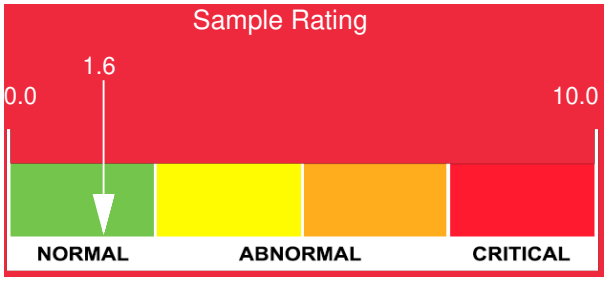
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
01/26/23	02/06/23	0.0y		381 / 194	21.9	29.0	0.40	0.158	701 / 372	813 / 434	921 / 494	4.04
05/02/22	05/10/22	0.0y		288 / 142	8.1	21.5	0.27	0.032	602 / 317	795 / 424	908 / 487	11.32
07/23/21	08/04/21	0.0y		356 / 180	814.5	28.8	0.63	0.072	696 / 369	808 / 431	906 / 486	4.90
01/15/21	01/26/21	0.0y		327 / 164	0.00	22.4	0.04	0.062	628 / 331	797 / 425	908 / 487	9.93
11/25/20	12/08/20	0.0y	Pump	338 / 170	9.1	27.1	0.15	0.107	683 / 362	805 / 430	911 / 488	6.00
Baseline Data				459 / 237		37.12	0.90		721 / 383	807 / 431	892 / 478	1.5

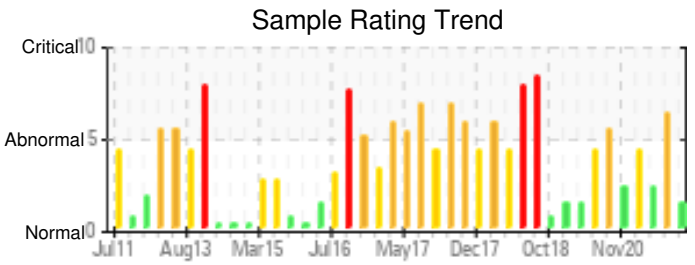






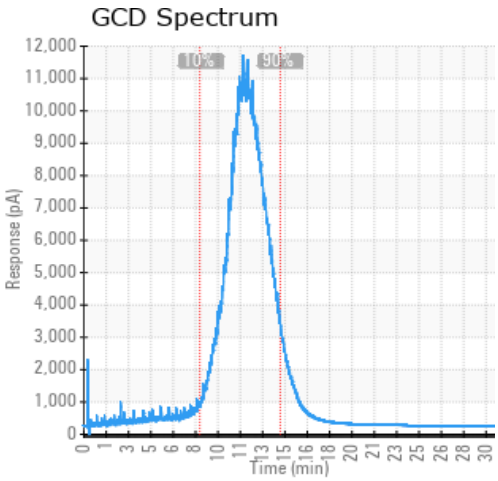
PETRO-CANADA LUBRICANTS

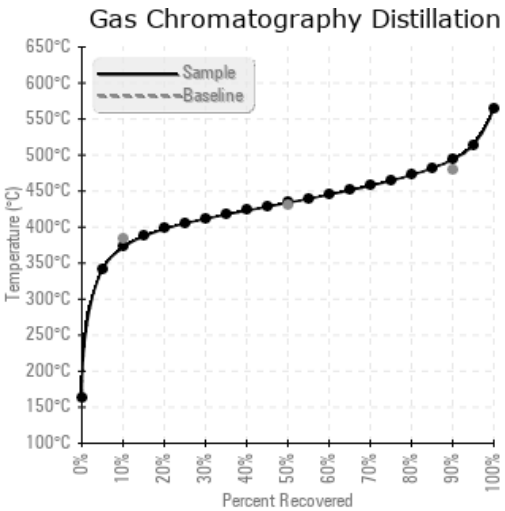


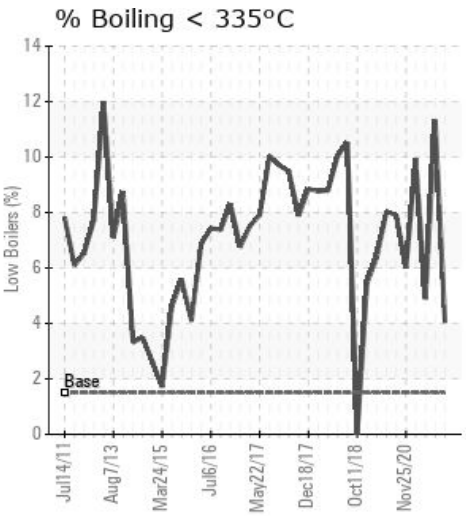


Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
01/26/23	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	4
05/02/22	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0
07/23/21	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0
01/15/21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0
11/25/20	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0
Baseline Data			0	0						0			0	0				0	0				230	

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







Historical Comments

05/02/22	Low boilers have increased which has lowered the flash point to a critical level we need to resample in 3 -6 months to watch and monitor to determine when a partial or full change out will be required -
07/23/21	Viscosity, low boilers have risen to acceptable levels and the flash point has increased by 16 degrees system is looking better. There is some water in the system it is within acceptable limits -but please check for any areas where water could be entering the system. Continue with the fluid and re sample at your next scheduled interval
01/15/21	Viscosity dropped 5 points, flash point dropped 6 degrees C, and low boilers have risen almost 4%. This system is nearing a partial or full change. I suggest continuing to run the system but resample in 2 months and prepare for maintenance this spring or early summer. (GCD) 10% Distillation Point is severely low. COC Flash Point is severely low. Visc @ 40°C is abnormally low. (GCD) % < 335°C is marginally high.
11/25/20	All indicators are better than previous sample. Viscosity is up, Flash point is up and low boilers are down. Continue to use and resample at next scheduled interval. COC Flash Point is severely low. (GCD) 90% Distillation Point is marginally high.

