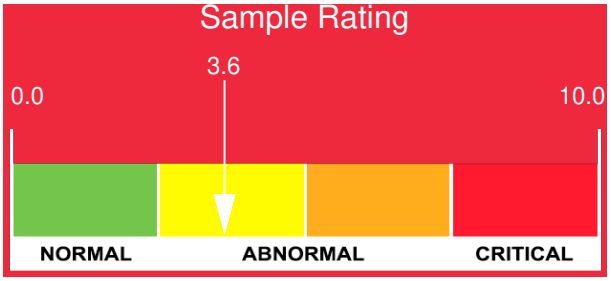
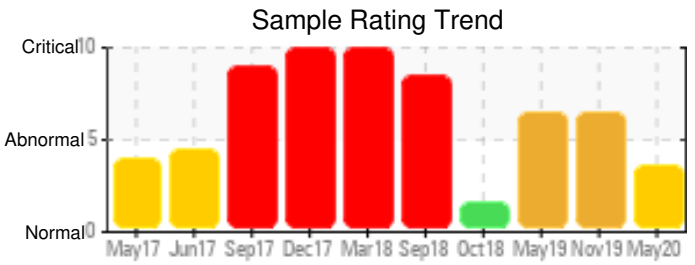




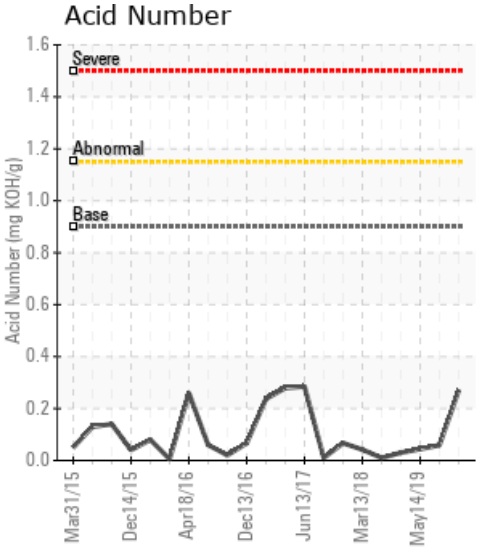
VTA HOT OIL PUMP

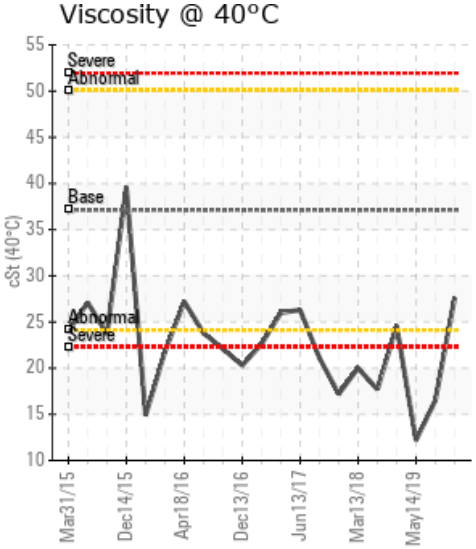
Customer: PTRHTF10004	System Information	Sample Information
ADM VITAMIN E PLANT 3700 EAST DIVISION STREET DECATUR, IL 62526 USA Attn: Rick Cluck Tel: (217)451-7770 E-Mail: ricky.cluck@adm.com	System Volume: 1800 gal Bulk Operating Temp: 650F / 343C Heating Source: Blanket: Fluid: PETRO CANADA PURITY FG HEAT TRANSFER FLUID Make: AMERICAN HEATING	Lab No: 02353746 Analyst: Joe Goecke Sample Date: 05/08/20 Received Date: 05/13/20 Completed: 05/21/20 Joe Goecke Joe.goecke@petrocanadalsp.com

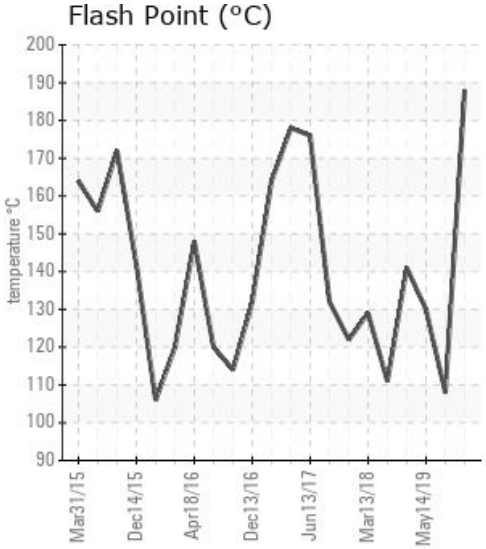
Recommendation: Viscosity is good, and although the flash point is lower than new it is still in an acceptable range for operating and the low boilers are less than 10%. Continue to operate and resample in 60-90 days.

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

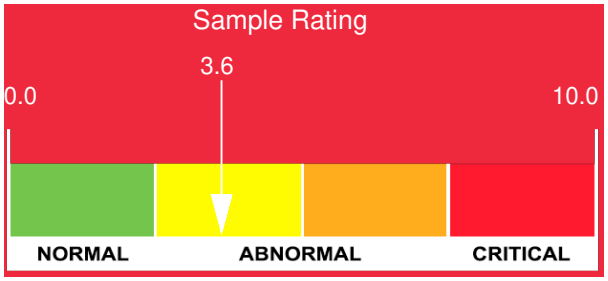
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
05/08/20	05/13/20	0y		370 / 188	13.3	27.6	0.27	0.074	666 / 352	802 / 428	901 / 483	7.59
11/13/19	11/21/19	0y	B4 HOT OIL PUMP	226 / 108	4.0	16.5	0.059	0.046	600 / 315	780 / 415	898 / 481	12.03
05/14/19	05/22/19	0y	B3	266 / 130	9.5	12.2	0.044	0.050	567 / 297	783 / 417	904 / 485	14.36
10/11/18	10/18/18	0y		286 / 141	10.0	24.6	0.03	0.036	677 / 358	802 / 428	908 / 487	6.37
09/20/18	09/27/18	2y		232 / 111	8.6	17.7	0.01	0.021	503 / 262	775 / 413	882 / 472	17.77
Baseline Data				459 / 237		37.12	0.90		721 / 383	807 / 431	892 / 478	1.5

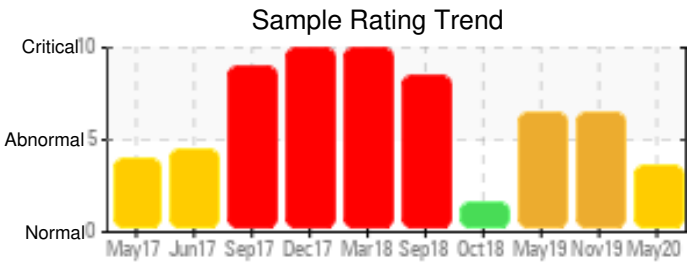






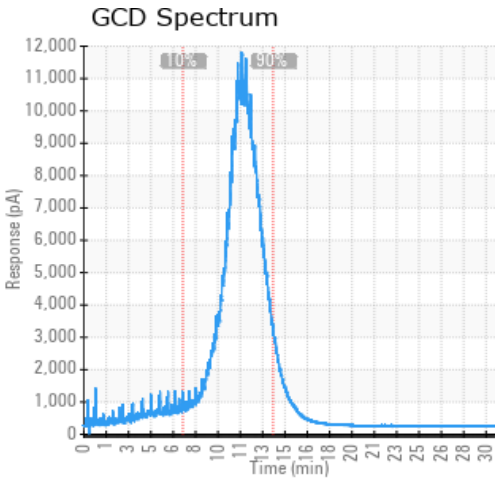
PETRO-CANADA LUBRICANTS

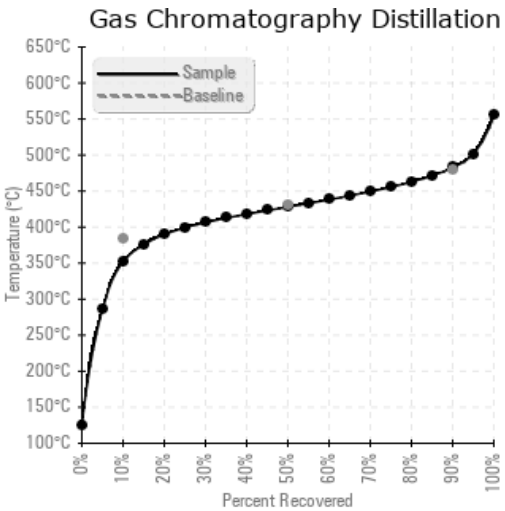


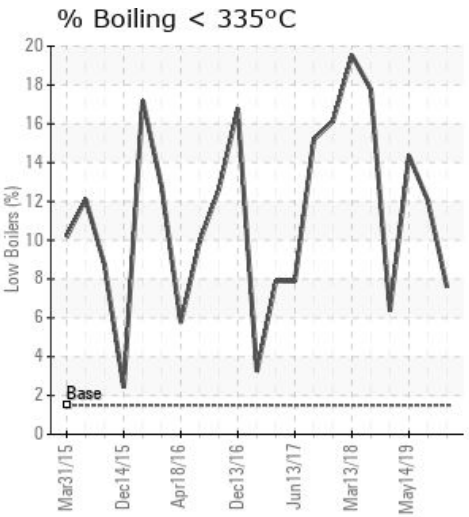


Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
05/08/20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0
11/13/19	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	0
05/14/19	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	0
10/11/18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0
09/20/18	1	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56	0
Baseline Data			0	0						0			0	0					0				230	

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







Historical Comments

11/13/19	Viscosity is still low and flash point has decreased I suggest planning a change or partial change to get the system in better condition within the next 45 days. (GCD) 10% Distillation Point is severely low. COC Flash Point is severely low. Visc @ 40°C is severely low. (GCD) % < 335°C is abnormally high.
05/14/19	This system is extremely low on viscosity at 12.2 cSt. Flash point is over 100 degrees C less than a fresh charge and the low boilers are over 14%. I recommend planning a change of this oil soon since venting is currently not an option. Heat transfer ability and safety are main concerns. (GCD) 10% Distillation Point is severely low. COC Flash Point is severely low. Visc @ 40°C is severely low. (GCD) % < 335°C is abnormally high.
10/11/18	System much better. Flash point still a little low, but 30 Degrees C higher than before. GCD points all looking better. Continue to use and resample in 60 days. COC Flash Point is severely low.
09/20/18	Viscosity is half of new oil, Flash point is extremely low, low boilers are very high at 17.8% 10% distillation point also very low at 261.8C. This heat transfer efficacy of this oil is going to suffer. Oil needs to be changed ASAP to improve safety of operation. (GCD) % < 335°C is severely high. (GCD) 10% Distillation Point is severely low. COC Flash Point is severely low. Visc @ 40°C is severely low.