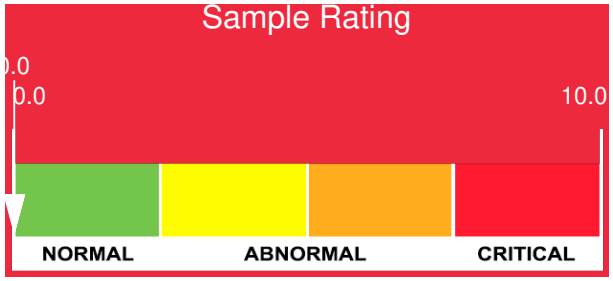
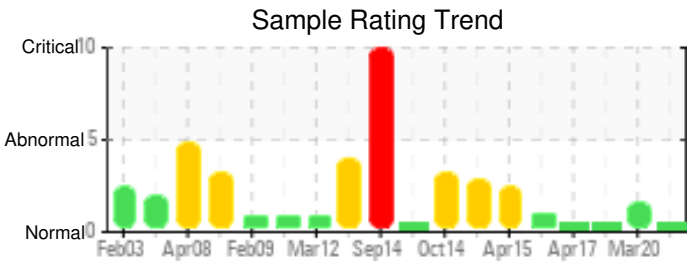




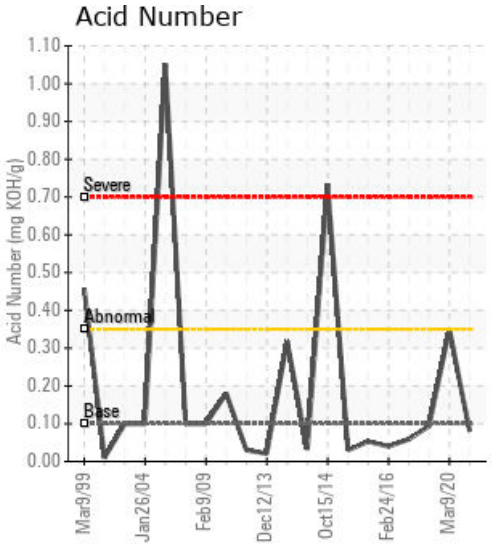
[12-01-49-16W5] H810

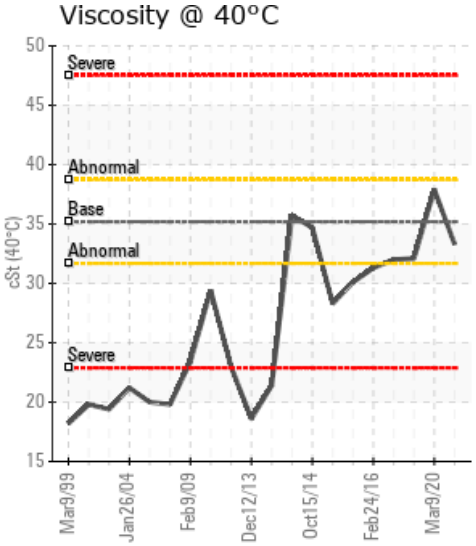
Customer: PTRHTF20024	System Information	Sample Information
CENOVUS PECO PLANT PECO GAS PLANT12-1-49-16w5 EDSON, AB CA Attn: Kevin James Tel: (780)728-4012 E-Mail: kevin.james@cenovus.com	System Volume: 12000 ltr Bulk Operating Temp: 527F / 275C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO HTF Make: ALCO GAS & OIL	Lab No: 02614327 Analyst: Lyle Dach Sample Date: 01/20/24 Received Date: 02/08/24 Completed: 02/13/24 Lyle Dach lyle.dach@HFSinclair.com

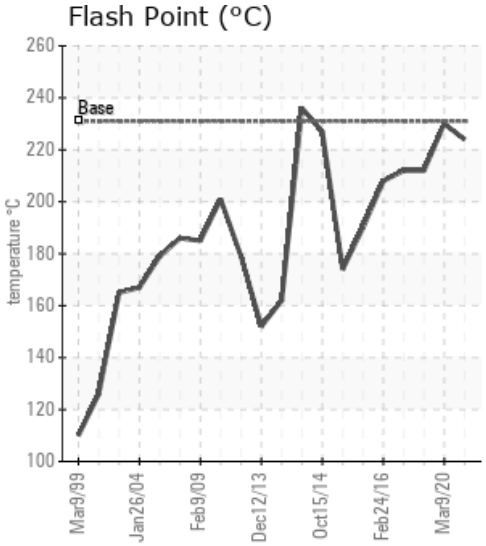
Recommendation: Sample results indicate that the fluid appears to be in good condition and is suitable for continued service. Resample in 12 months.

Comments:

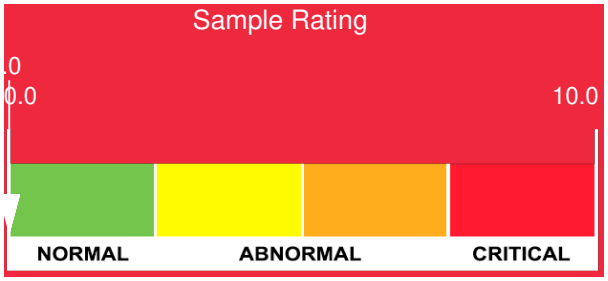
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
01/20/24	02/08/24	0.0h		435 / 224	22	33.3	0.08	0.311	709 / 376	806 / 430	912 / 489	2.38
03/09/20	04/08/20	0.0h	PUMP DISCHARGE	446 / 230	9.4	37.9	0.35	0.895	713 / 378	804 / 429	902 / 484	0.00
10/04/17	10/18/17	3.0h		414 / 212	2.3	32.1	0.094	0.092	703 / 373	803 / 429	907 / 486	2.59
04/10/17	04/21/17	30.0h		414 / 212	2.6	32.0	0.059	0.066	702 / 372	805 / 429	908 / 487	2.73
02/24/16	03/07/16	0.0h	DOWNSTREAM OF PUMP	406 / 208	0.8	31.3	0.04	0.085	710 / 377	817 / 436	929 / 498	2.44
Baseline Data				448 / 231		35.20	.1		712 / 378	810 / 432	910 / 488	1.75

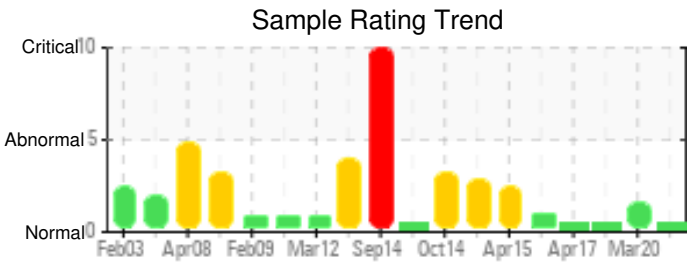






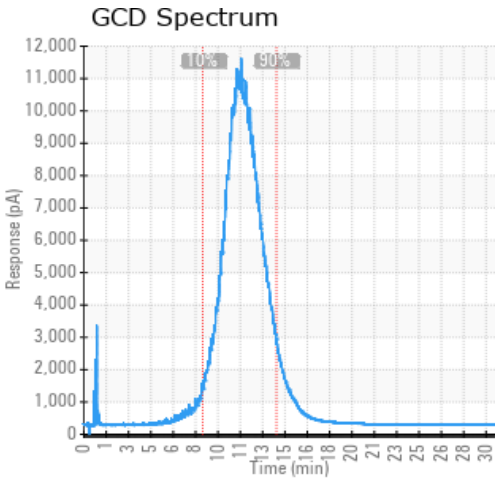
PETRO-CANADA LUBRICANTS

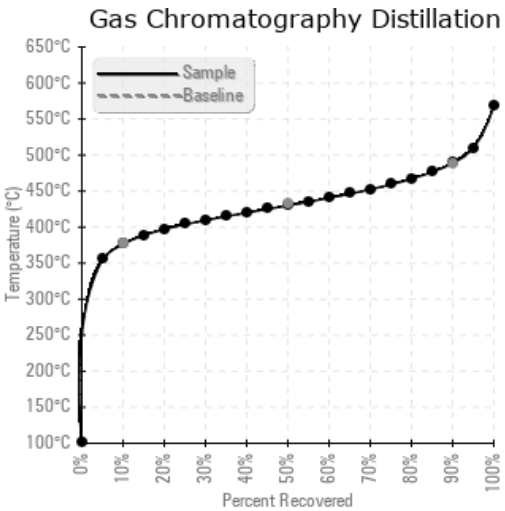


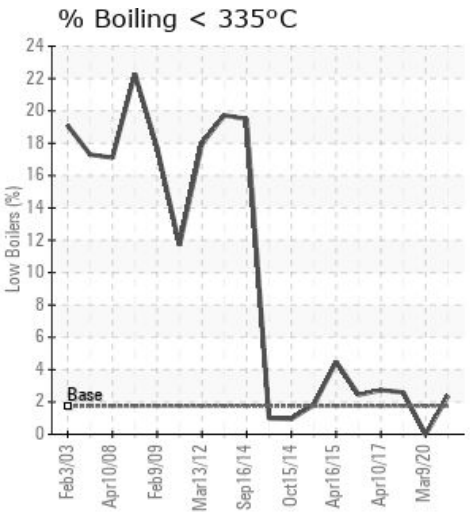


Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
01/20/24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	0
03/09/20	2	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	0
10/04/17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0
04/10/17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0
02/24/16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0
Baseline Data			0	0						0			0	0				0	0				280	

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







Historical Comments

03/09/20	Pentane Insolubles are higher then normal. Final boiling point has been declining. Ensure gas blanket is in place and vent system as required to evacuate low boilers from system. Resample in 6 months. Pentane Insolubles levels are severely high.
10/04/17	This sample is in good shape and is OK for continued use. Resample in 12 months.
04/10/17	This fluid looks good and is suitable for further use. More information is required for any further interpretation.
02/24/16	The fluid is in good condition and suitable for further use. Flash Point and Percentage boil-off below 335 degrees C have improved compared with the previous sample. The 10% GCD temperature has increased close to fresh fluid. If venting is taking place as recommended earlier, keep doing this. A negative side effect of venting low boiler vapors to atmosphere is contact of hot fluid with outside air resulting in oxidation of the fluid. The 90% GCD temperature has increased as a result of this. Fluid degradation by oxidation can be limited by venting for a shorter duration but more frequently. Please resample in 12 months. (GCD) 90% Distillation Point is marginally high.