

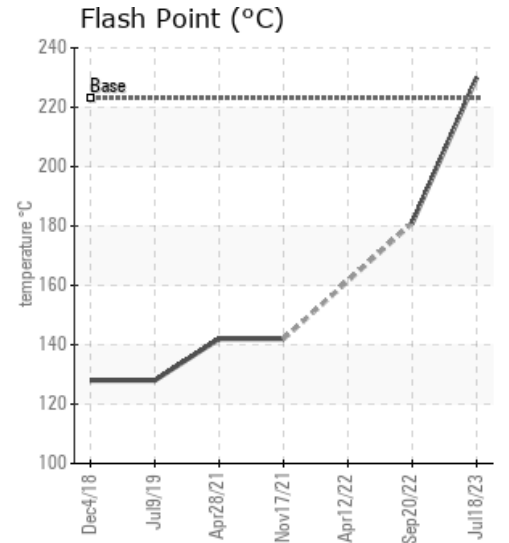
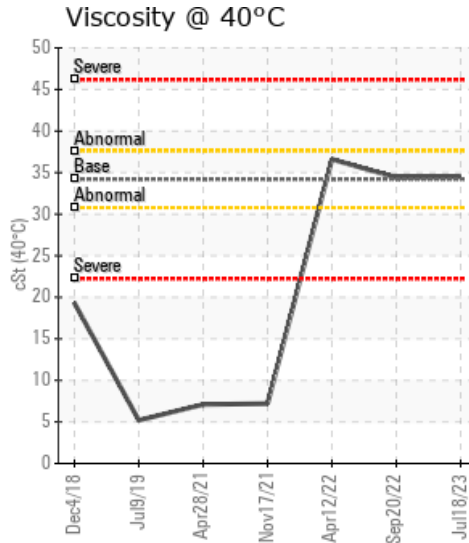
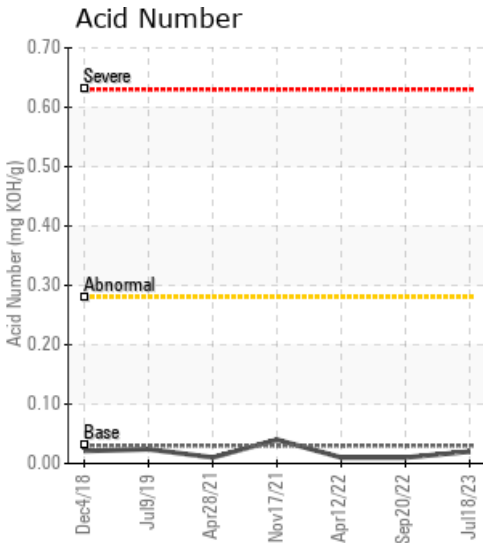
### H-30

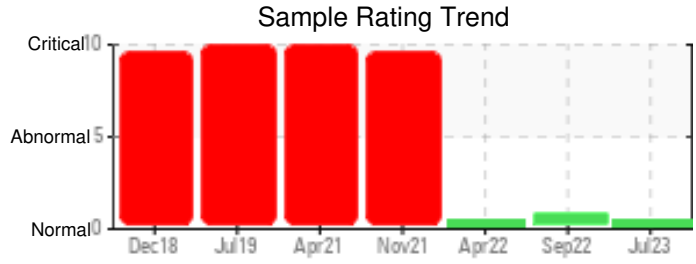
Customer: PTRHTF20208	System Information	Sample Information
Plains Midstream Canada PO Box 3210 Range Road 221 Fort Saskatchewan, AB T8L 2T2 CA Attn: David Eastman Tel: E-Mail:	System Volume: 1000 ml Bulk Operating Temp: 482F / 250C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make:	Lab No: 02572800 Analyst: Terry Veenstra Sample Date: 07/18/23 Received Date: 07/27/23 Completed: 07/31/23 Terry Veenstra terry.veenstra@HFSinclair.com

Recommendation: Sample indicates that oil is in good condition and suitable for further use. Resample in 6 months.

Comments:

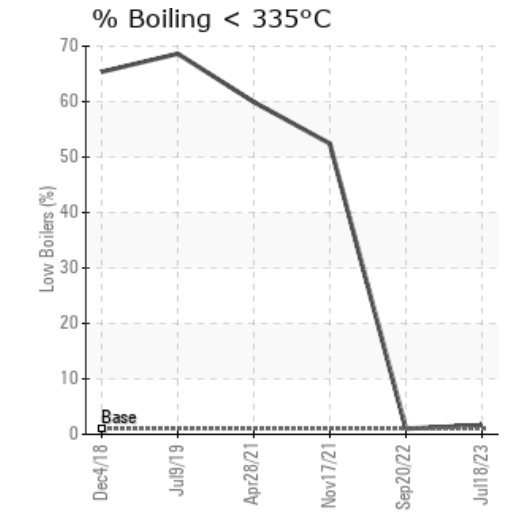
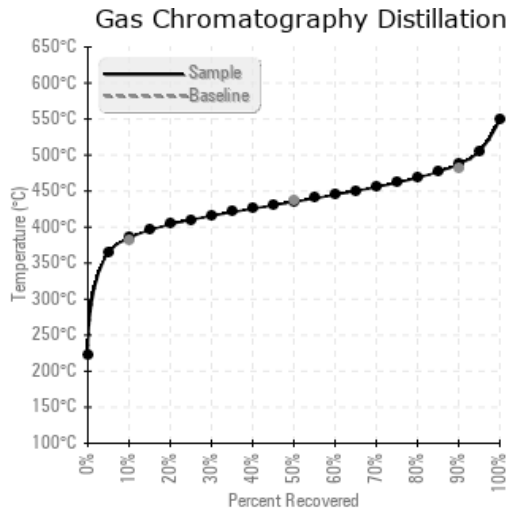
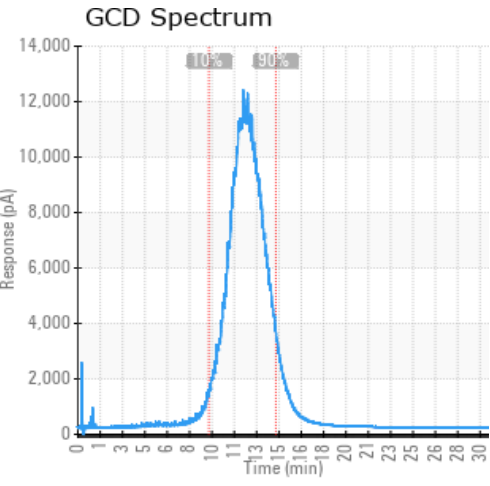
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
07/18/23	07/27/23	0.0y	after filtering syst	446 / 230	69.2	34.5	0.02	0.031	725 / 385	815 / 435	909 / 487	1.66
09/20/22	09/26/22	0.0y	AFTER FILTERING	358 / 181	119.9	34.4	0.01	0.070	729 / 387	815 / 435	908 / 487	1.01
04/12/22	04/18/22	0.0y	after filtering syst		333.5	36.6	0.01	0.035				
11/17/21	11/22/21	0.0y	Surge drum	288 / 142	19.5	7.2	0.04	0.026	458 / 237	616 / 324	858 / 459	52.42
04/28/21	05/05/21	22.0y	After filtering syst	288 / 142	24.2	7.1	0.01	0.018	456 / 235	581 / 305	838 / 448	59.94
Baseline Data				433 / 223		34.2	0.03		720 / 382	817 / 436	900 / 482	1.00





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
07/18/23	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
09/20/22	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/12/22	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/17/21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/28/21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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

09/20/22	This samples indicates that the oil is in good condition and suitable for continued use. Resample in 6 months. COC Flash Point is marginally low.
04/12/22	*** GCD analysis and Flash Point could not be performed because of the high water content in the sample ***Excessive amounts of water in sample. Check sample point to ensure the sample is representative of the fluid in the system. Viscosity of fluid indicates this is now new Petro-Therm.Vent system to eliminate and water vapors. Excessive free water present.
11/17/21	This oil viscosity is 7.2 cSt @ 40°C so is still the majority Essotherm Light (1156). The TAN is still quite low at 0.04 mgKOH/g and the flash point is still good @ 142°C indicating the fluid is in pretty good shape. The Pentane Insolubles are at 0.026% which is high then past samples but still in a good range. The GCD results are all over the map because this is a blend of different products. Resample in 6 months (GCD) % < 335°C is severely high. (GCD) 10% Distillation Point is severely low. (GCD) 50% Distillation Point is severely low. Visc @ 40°C is severely low. COC Flash Point is marginally low.
04/28/21	This oil viscosity is 7.1 cSt @ 40°C so is still the majority Essotherm Light (1156). The TAN is still quite low at 0.01 mgKOH/g and the flash point is still good @ 142°C indicating the fluid is in pretty good shape. The Pentane Insolubles are at 0.018% which is normal. (GCD) % < 335°C is severely high. (GCD) 10% Distillation Point is severely low. (GCD) 50% Distillation Point is severely low. Visc @ 40°C is severely low. COC Flash Point is marginally low. (GCD) 90% Distillation Point is marginally low.

Petro-Canada makes no representation or warranty of any kind, either express or implied, as to the accuracy or completeness of the analysis and assumes no responsibility and shall have no liability whatsoever with respect to such analysis, or a party's use of it. Petro-Canada is a division of HollyFrontier Corporation.