

POWDER SLUSH COLD OIL RETURN

Customer: PTRHTF30023

INOAC INTERIOR SYSTEMS 575 JAMES STREET SOUTH ST MARYS, ON N4X 1B9 Canada

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System Information

System Volume: 14000 ltr

Bulk Operating Temp: 500F / 260C

Heating Source:

Blanket:

Fluid: PETRO CANADA CALFLO LT Make: BP&R CONSTRUCTION

Sample Information

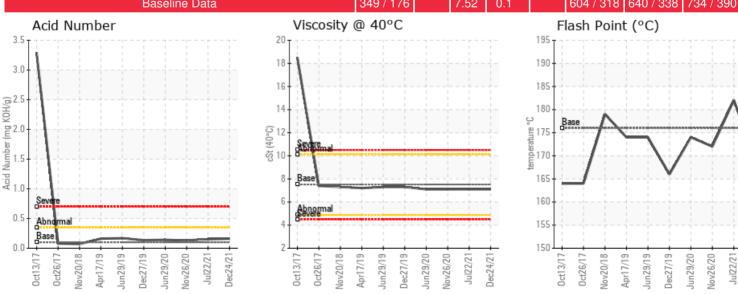
Lab No: 02465227 Analyst: Adam Koscielak Sample Date: 12/24/21 Received Date: 01/07/22 Completed: 01/13/22 Adam Koscielak

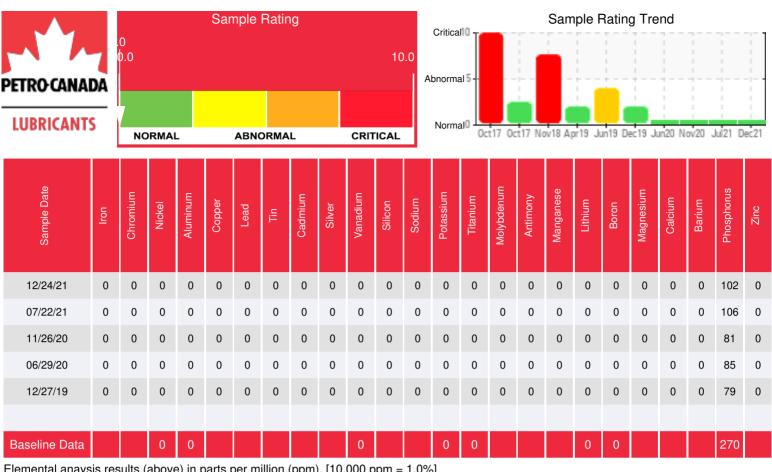
adam.koscielak@hollyfrontier.com

Recommendation: Sample results indicate that the fluid is suitable for continue use. Please, sample at the next appropriate interval (6 to 9 months). No action needed at this time.

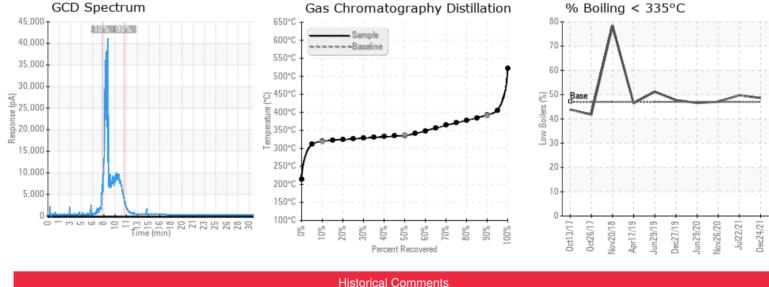
Comments:

Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	%06 QOD	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/ g	%wt	°F/°C	°F/°C	°F/°C	%
12/24/21	01/07/22	0.0h		338 / 170	8.5	7.1	0.16	0.026	606 / 319	636 / 335	738 / 392	48.62
07/22/21	07/23/21	0.0h		360 / 182	24.5	7.1	0.15	0.146	606 / 319	635 / 335	735 / 391	49.73
11/26/20	12/03/20	0.0h		342 / 172	19.3	7.1	0.13	0.047	608 / 320	636 / 336	737 / 392	47.03
06/29/20	06/30/20	0.0h		345 / 174	19.4	7.1	0.14	0.101	609 / 321	637 / 336	737 / 392	46.59
12/27/19	01/08/20	0.0h		331 / 166	14.3	7.3	0.134	0.209	607 / 320	637 / 336	730 / 388	47.75
		Baseline	Data	349 / 176		7.52	0.1		604 / 318	640 / 338	734 / 390	47.0





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



Historical Comments						
07/22/21	Results of the heat transfer oil for the Cold Oil Return are typical for Calflo LT. No evidence of product degradation. Viscosity, Total Acid Number, GCD, Flash Point are within typical parameters. Fluid is suitable for continued use. Submit sample at next appropriate interval (6 - 9 months).					
11/26/20	Sample is consistent with used Calflo LT. Sample indicates fluid is suitable for continued use. Sample at next interval.					
06/29/20	Current analysis of the Cold Oil Return system indicates the oil is suitable for continued use. GCD profile is consistent with Calflo LT. Acid number, viscosity and water are consistent as well. No indication of wear metals indicated either. The flash point has increased slightly. Pentane insolubles have decreased from 0.209 to 0.101. Always ensure that the sample line is flushed thoroughly to remove any insolubles that may have accumulated over time, before the sample is taken. Resample at next interval.					
12/27/19	Current analysis of the Cold Oil Return system indicates the oil is suitable for continued use. GCD profile is consistent with Calflo LT. Acid number, Viscosity are consistent. No indication of wear metals. Pentane insoluble have shown an increase from 0.033 to 0.209. Please ensure that sample line is flushed thoroughly, to remove an insolubles that may have accumulated over time, before the sample is taken. Resample at next interval.					

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