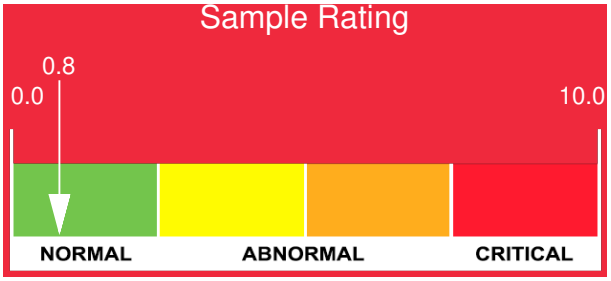
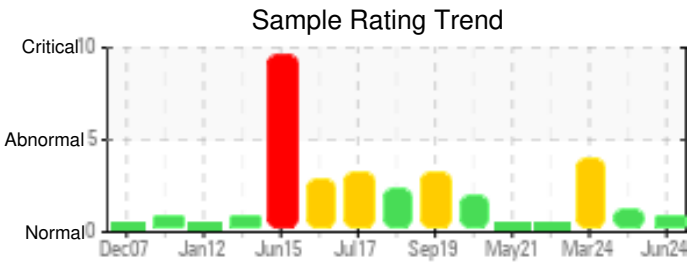
PETRO-CANADA LUBRICANTS





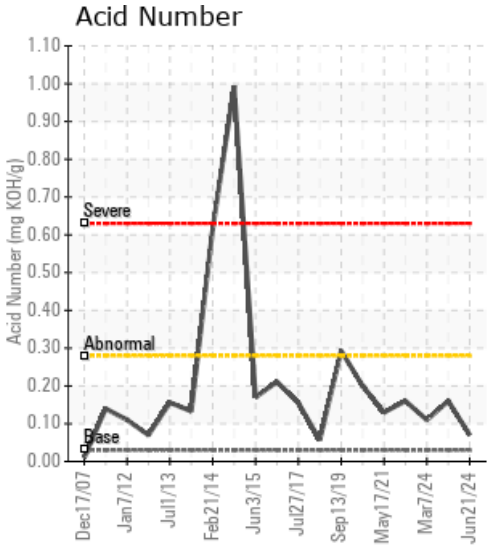
BACK END

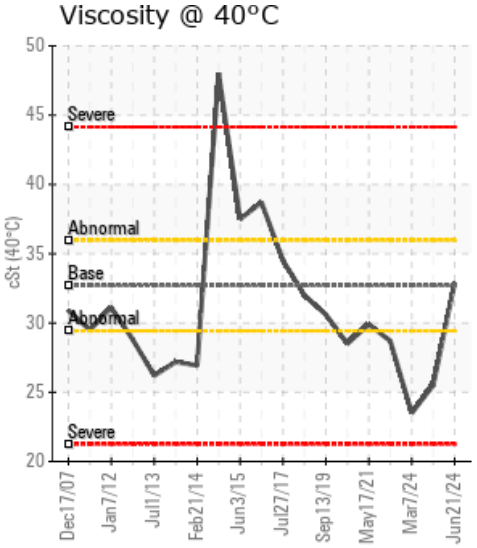
Customer: PTRHTF10037	System Information	Sample Information
CERTAINTEED ROOFING 200 SIERRA DR PEACHTREE CITY, GA 30269 US Attn: Ted Thompson Tel: E-Mail: Theodore.w.thompson@saint-gobain.com	System Volume: 1300 gal Bulk Operating Temp: 600F / 316C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO AF Make: HEATEC	Lab No: 02644447 Analyst: Manny Garcia Sample Date: 06/21/24 Received Date: 06/27/24 Completed: 07/02/24 Manny Garcia manuel.garcia@HFSinclair.com

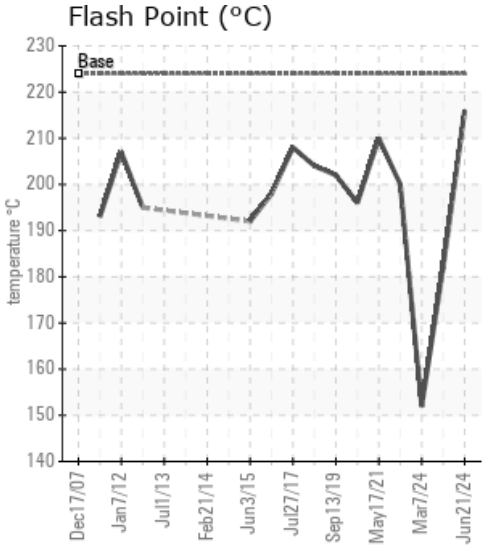
Recommendation: This system was sampled 03/07/24; 04/24/24 and 06/21/24 & the final results were a great improvement over the previous two. This final sample is suitable for continued use. Please re-submit your annual sample in June, 2025

Comments: Fluid viscosity back in the ISO 32 range. COC flash point has improved up to 216oC which is satisfactory. The distillation points are all acceptable.

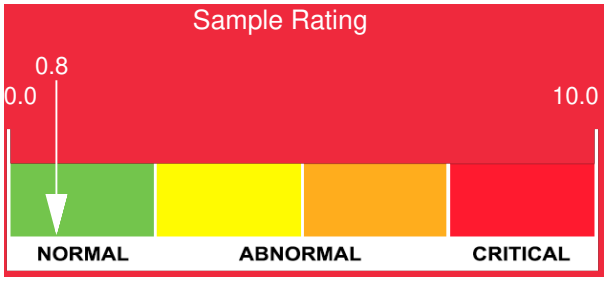
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
06/21/24	06/27/24	0.0y	BACK OF HEATER	421 / 216	11	32.9	0.07	0.133	668 / 353	792 / 422	906 / 485	6.44
04/24/24	04/30/24	0.0y		360 / 182	6	25.5	0.16	0.094	648 / 342	789 / 421	903 / 484	8.50
03/07/24	03/26/24	0.0y	BACK OF HEATER	306 / 152	29	23.5	0.11	0.069	647 / 342	786 / 419	894 / 479	8.58
07/28/23	08/04/23	6.0y	back of heater	392 / 200	22.5	28.7	0.16	0.125	677 / 359	794 / 423	904 / 485	5.09
05/17/21	06/08/21	4.0y	Main return	410 / 210	21.2	29.9	0.13	0.106	681 / 361	782 / 417	891 / 477	4.01
Baseline Data				435 / 224		32.7	0.03		693 / 367	790 / 421	887 / 475	2.5

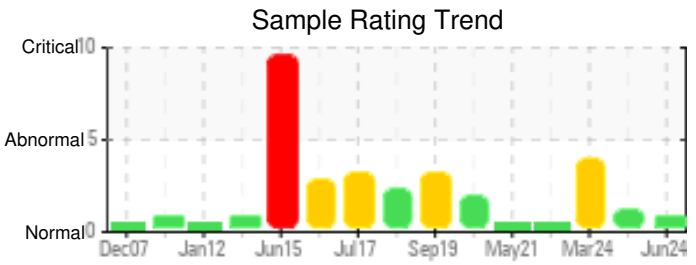






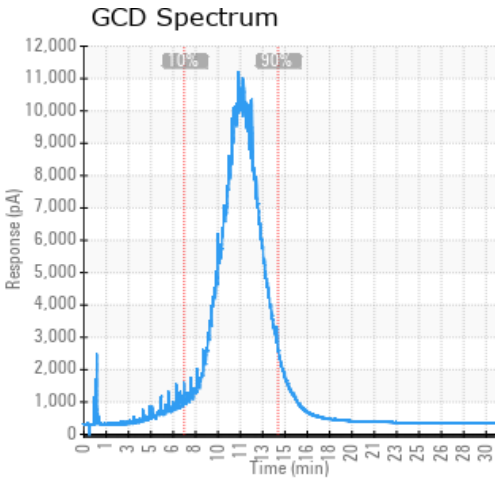
PETRO-CANADA LUBRICANTS

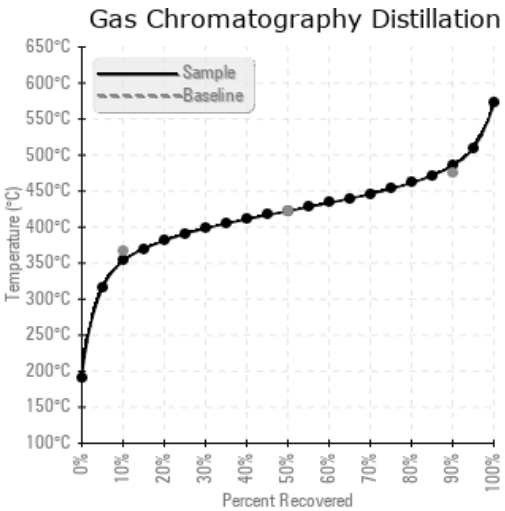


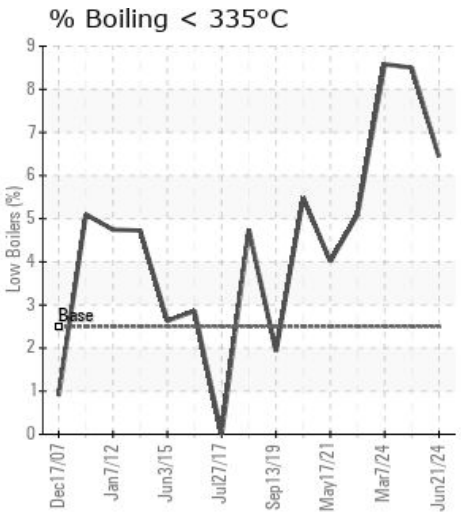


Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
06/21/24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53	0
04/24/24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	61	0
03/07/24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47	0
07/28/23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59	1
05/17/21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0
Baseline Data			0	0						0			0	0					0				270	

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







Historical Comments

04/24/24	Quarterly venting of this heat transfer system is highly recommended to maintain fluid integrity.This sample submitted shows improvement from 3-7-24. Visc @ 40°C is still abnormally low (ISO 22 Cst range), but has improved slightly. The COC Flash Point is marginally low, but it has improved by 30oC since the system was mitigated between March 7th when the last sample was submitted. Hopefully venting the system gave you this improvement. Overall, the fluid in the system is in much better condition.
03/07/24	This system should be vented to attempt to mitigate the issues with the GCD % < 335oC values and the severely low Flash Point. Once the system has been maintained, please re-submit another fluid sample. & if the corrections have not improved the fluid conditions, we recommend a full fluid change-out for plant & personnel safety reasons.COC Flash Point is severely low @ 152oC or 72oC lower than the design parameters of the fluid. These are very dangerous levels for a Heat Transfer Fluid. Visc @ 40°C is abnormally low @ 23.5 CsT @40oC. (GCD) % < 335°C is marginally high.
07/28/23	Oil is in satisfactory conditions. Please re-submit sample in July 2024,Very light white metals visible in sample, but not affecting performance. Any system filters (if any) should be changed.
05/17/21	Fluid is suitable for continued use and in EXCELLENT condition after 4 years of use. Please re-submit sample mid-year 2022.