

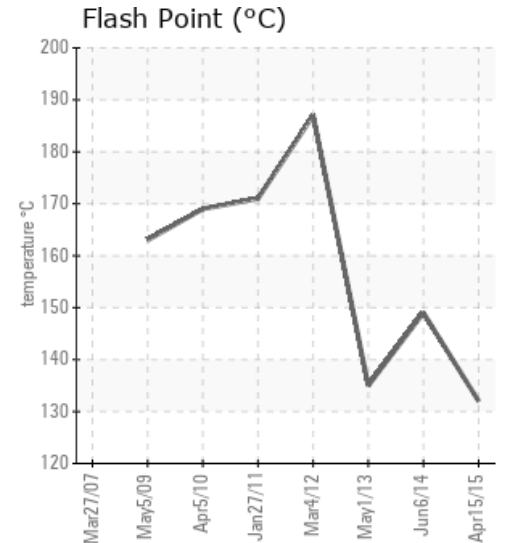
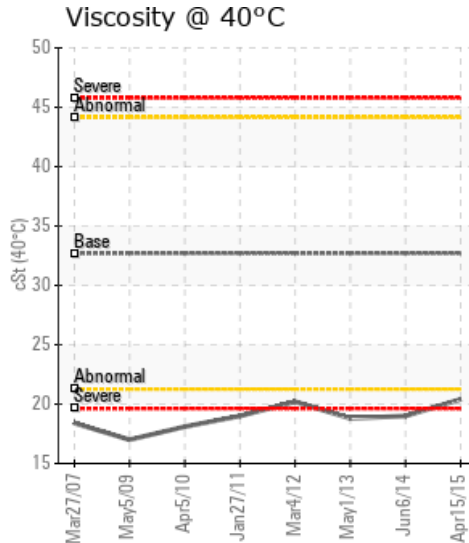
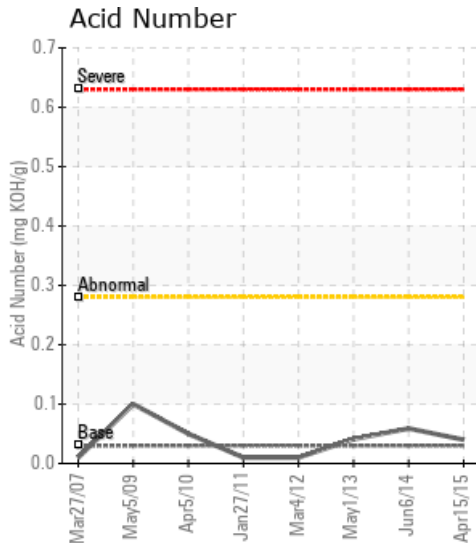
LINE 2 FILLED COATING CHROMALOX

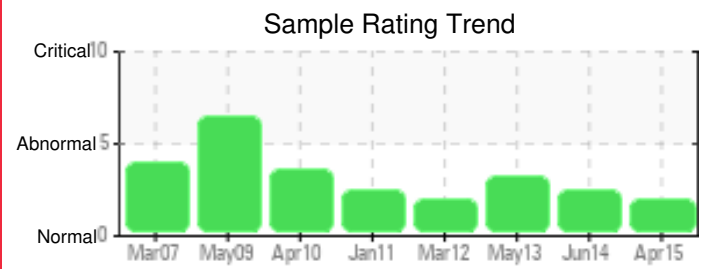
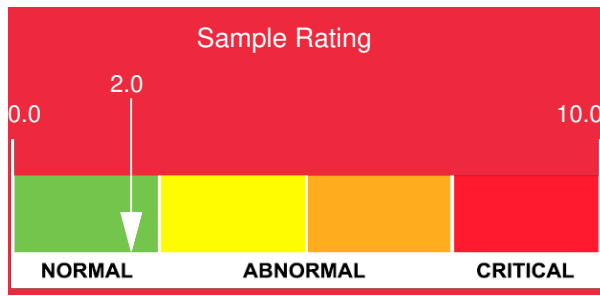
Customer: PTRHTF10069	System Information	Sample Information
CERTAINTEED - SAINT GOBAIN 3303 EAST 4TH AVENUE SHAKOPEE, MN 55379 USA Attn: Patrick Wallace Tel: E-Mail: patrick.wallace@saint-gobain.com	System Volume: 1890 gal Bulk Operating Temp: 474F / 246C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO AF Make: CHROMALOX	Lab No: 01993901 Analyst: Bill Quesnel CLS, OMA II, MLA-III, LLA-I Sample Date: 04/15/15 Received Date: 05/07/15 Completed: 04/10/18 To discuss this report contact Bill

Recommendation: Flash point is severely low and system should be vented or fluid changed. Viscosity at 40C is substantially lower than new Calflo AF - investigate source. NOTE: Sample is more than 1 year old and was never completed. Closing out in LIMS system.

Comments: COC Flash Point is severely low. Visc @ 40°C is abnormally low.

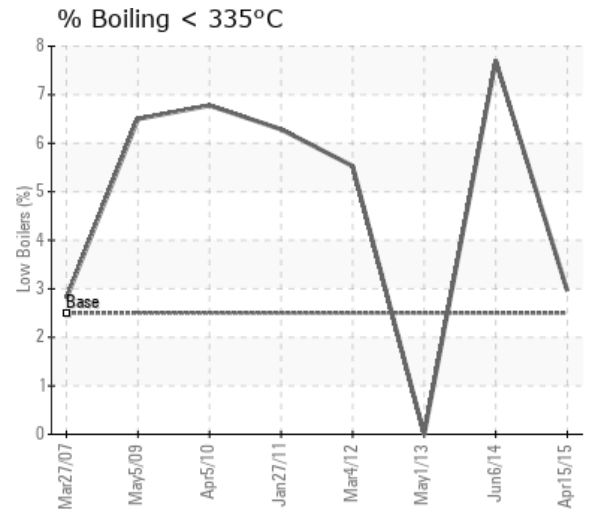
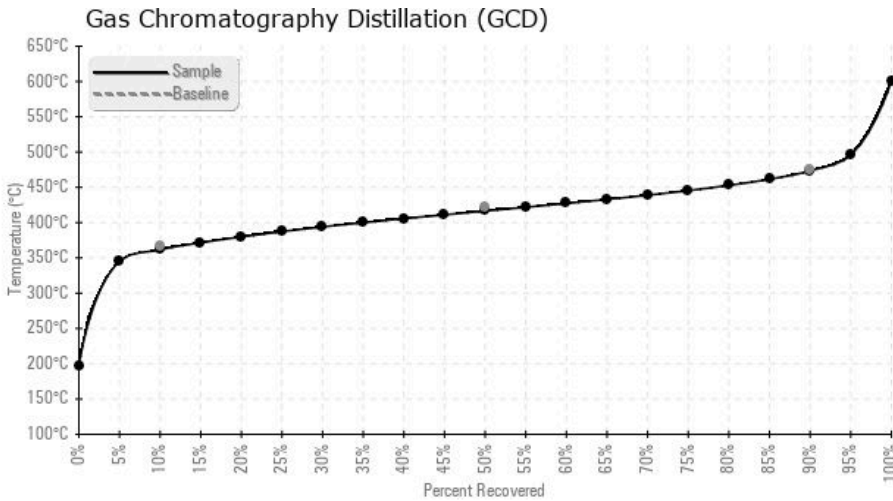
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
04/15/15	05/07/15	0y	MN FLOW/MN SYS PUMP	270 / 132	18.8	20.4	0.04	0.031	683 / 362	782 / 417	884 / 474	2.96
06/06/14	06/17/14	0y	MAIN FLOW NEAR PUMP	300 / 149	11.0	19.0	0.059	0.016	654 / 346	777 / 414	877 / 469	7.70
05/01/13	05/15/13	0y	MAIN SYSTEM FLOW	275 / 135	53.2	18.8	0.041	0.032	699 / 371	775 / 413	861 / 461	0.00
03/04/12	03/14/12		MAINSYSTEM FLOW	369 / 187	43	20.2	0.01	0.014	671 / 355	765 / 407	866 / 464	5.53
01/27/11	01/31/11			340 / 171	46	19	0.01	0.008	667 / 353	755 / 402	852 / 455	6.286
04/05/10	04/08/10		MAIN FLOW NEAR PUMP	336 / 169	24.8	18.1	0.05	0.020	663 / 351	750 / 399	847 / 453	6.779
Baseline Data				435 / 224		32.7	0.03		693 / 367	790 / 421	887 / 475	2.5





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
04/15/15	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	1	0	60	0
06/06/14	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	48	0
05/01/13	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	39	0
03/04/12	1	0	0	0	0	0	1	0	0	0	5	0	2	0	0	0	0	0	3	0	0	1	67	0
01/27/11	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	1	0	0	14	0
04/05/10	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0
Baseline Data			0	0						0			0	0					0				270	

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



Historical Comments

06/06/14	Flash point is severely low and system should be vented or fluid changed. Viscosity at 40C is substantially lower than new Calflo AF - investigate source. COC Flash Point is severely low. Visc @ 40°C is severely low.
05/01/13	The accuracy of the results is questionable, specially the low flash point and strange GCD results. We will have a discussion with the lab about this. The oil shows 0 low boilers, 5.5% less than the last sample yet the viscosity dropped by another 10%. The flash point dropped by 50 deg C which is too much of a drop since the last sample was at 170-180C. We are releasing the report but have trust issues with the flash point and GCD data. Regardless of the above, one thing is sure is the system needs venting to get the viscosity back up and and low boilers under control. COC Flash Point is severely low. Visc @ 40°C is severely low. (GCD) 90% Distillation Point is marginally low.
03/04/12	The reason why some data is flagged and color coded this time and it did not in the past is because the lab previously compared results against Mobiltherm, while now they probably changed it to Calflo AF based on what was indicated on the paperwork. The oil condition looks excellent at this time. We will remind you when the next round of sampling is due.
01/27/11	Calflo AF content is slowly rising and so is the flash point. All looks good. Re-sample in 6 months to monitor condition.
04/05/10	The oil condition appears to be consistent with Mobiltherm 603. The flash point is slightly lower than fresh oil but it has been consistently that way, maybe due to the presence of some low boilers. Venting them out would help a bit. Suitable for further use.

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