

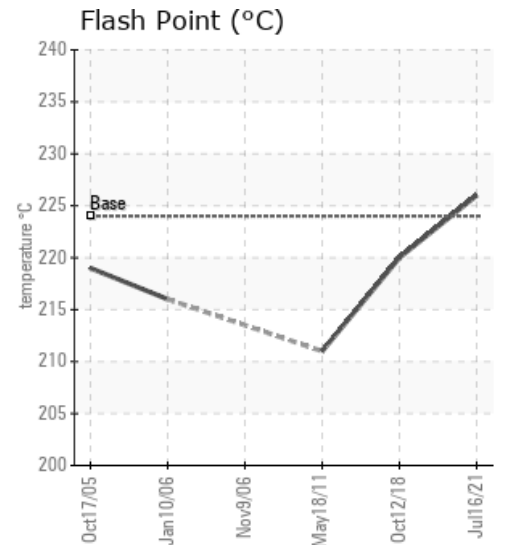
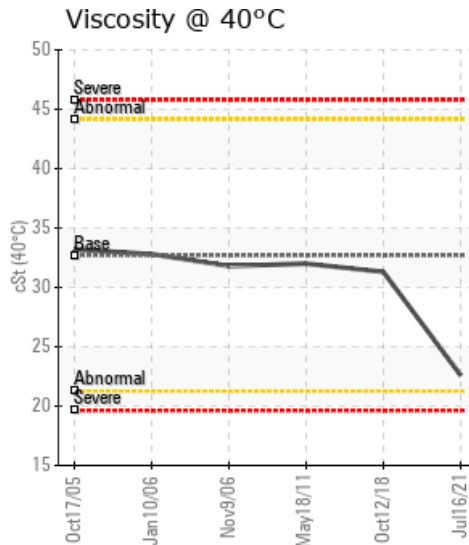
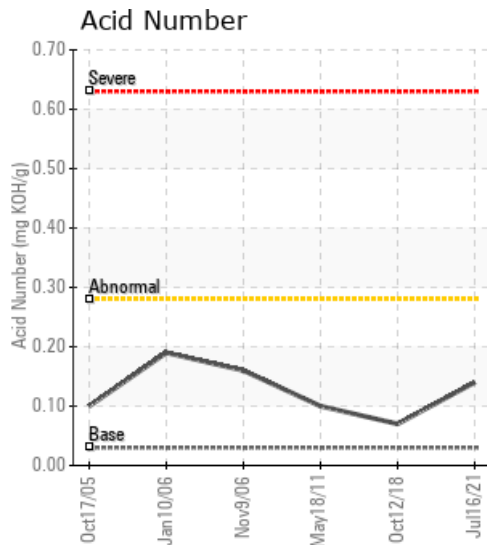
## 835 HX 001

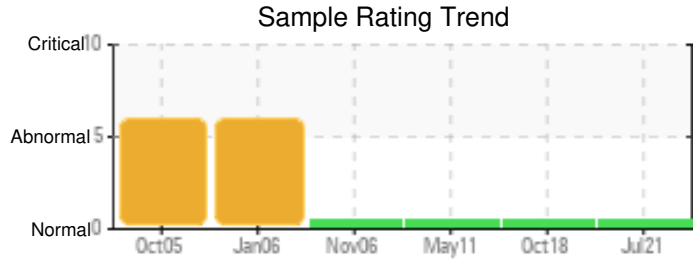
Customer: PTRHTF30002	System Information	Sample Information
Alcoa - Aluminerie Deschambeau 1 Boulevard Des Sources DESCHAMBAULT, QC G0A 1S0 Canada Attn: Claude Jean Tel: (418)286-5219 E-Mail:	System Volume: 5000 ltr Bulk Operating Temp: 226F / 108C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO AF Make:	Lab No: 02434764 Analyst: Pierre Castagne Sample Date: 07/16/21 Received Date: 07/23/21 Completed: 08/10/21 Pierre Castagne pierre.castagne@hollyfrontier.com

Recommendation: La viscosite de l'huile caloporteur dans le systeme est ISO VG 22, la viscosité de l'huile Calflo AF est ISO VG 32. Il semblerait avoir un mélange avec une huile de viscosité plus legere.

Comments:

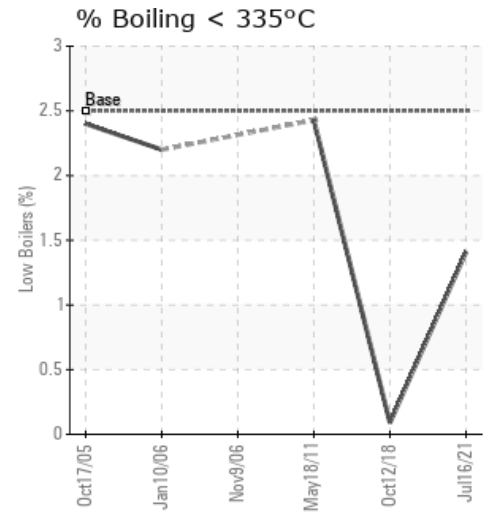
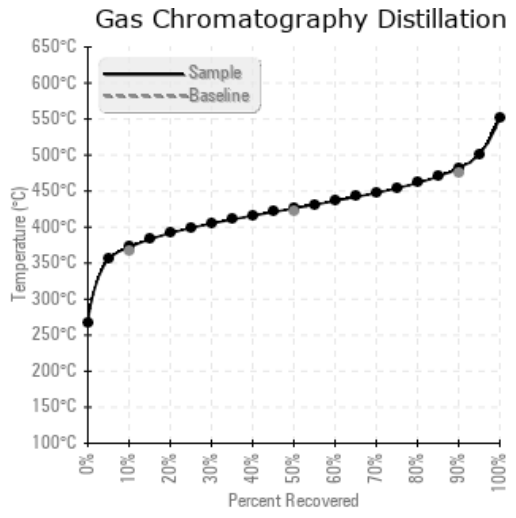
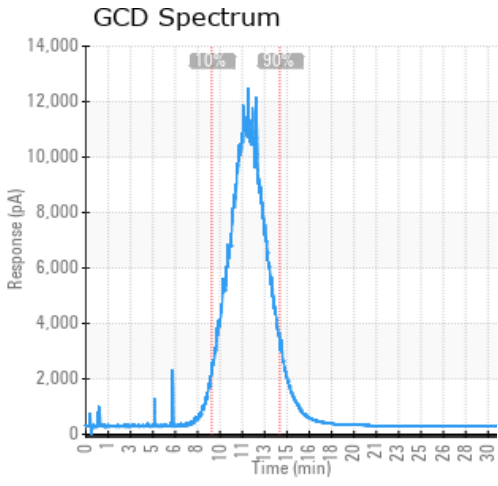
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
07/16/21	07/23/21	0.0y		439 / 226	91.8	22.6	0.14	0.118	701 / 372	799 / 426	899 / 482	1.41
10/12/18	10/17/18	0.0y		428 / 220	56.0	31.3	0.07	0.140	702 / 372	798 / 425	893 / 478	0.09
05/18/11	05/24/11			412 / 211	77	32	0.1	0.025	695 / 368	794 / 423	890 / 477	2.429
11/09/06	11/23/06					31.8	0.16					
01/10/06	01/16/06			421 / 216	310	32.8	0.19		696 / 369		885 / 474	2.2
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
07/16/21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	0
10/12/18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	76	0
05/18/11	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	70	0
11/09/06	0	1	0	0	0	0	0	0	0	0	3	0		0	0		0		0	0	0	0	48	0
01/10/06	0	0	0	0	0	0	0	0	0	0	8	71		0	0		0		0	0	0	0	150	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	
10/12/18	Tous les paramètres sont normaux. Nous recommandons de continuer de suivre la procédure habituelle de ventilation des fractions légères à travers le réservoir d'expansion. SVP ré-échantillonner dans 9 à 12 mois et faire analyser pour suivre l'évolution des fractions légères dans le system caloporteur. Aucuns métaux d'usures détectés Aucune contamination détectée L'huile est en bonne condition d'opération.
05/18/11	
11/09/06	
01/10/06	

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