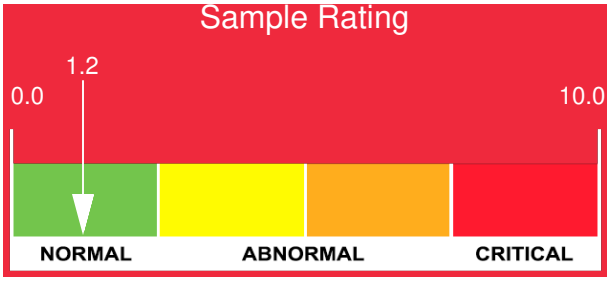
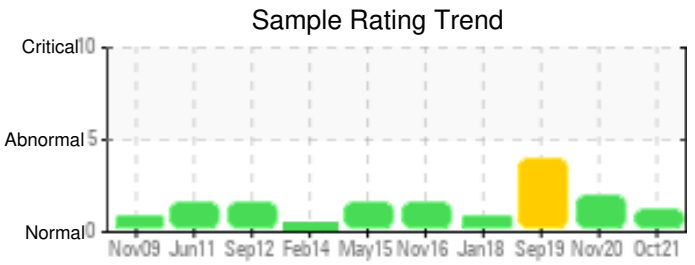




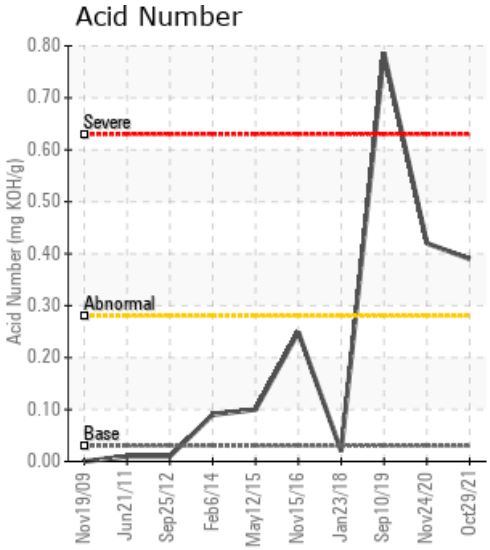
WANSON TPC 850 LN MP

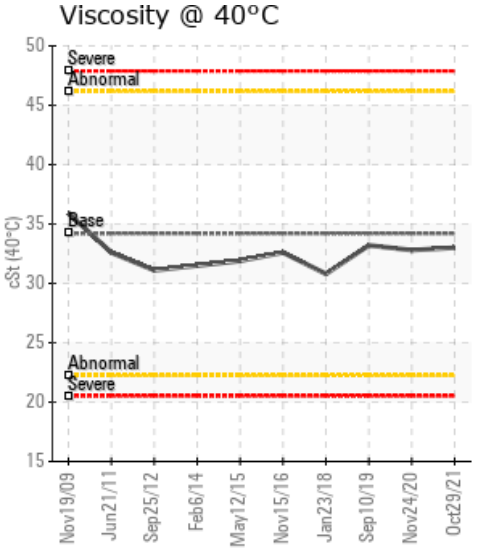
Customer: PTRHTF40072	System Information	Sample Information
KINGSPAN INSULATION BV INDUSTRIEWEG 3 KESTEREN 4041CR KESTEREN, 4041CR Netherlands Attn: WILBERT SNIJERS Tel: E-Mail: w.snijers@klt.nl	System Volume: 1600 ltr Bulk Operating Temp: 160F / 71C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: WANSON	Lab No: 02454604 Analyst: Luis Rodriguez Sample Date: 10/29/21 Received Date: 11/08/21 Completed: 11/23/21 Luis Rodriguez luis.rodriguez@hollyfrontier.com

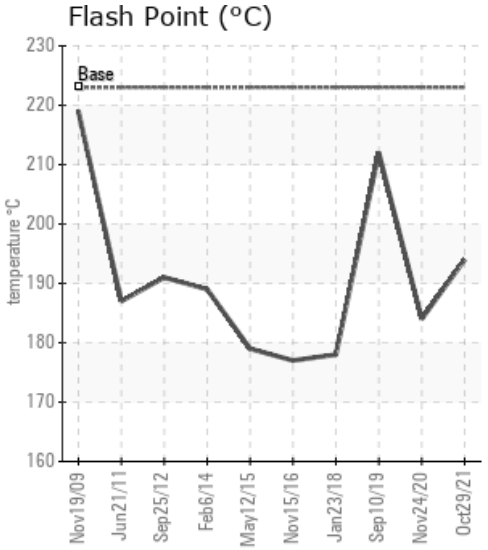
Recommendation: Acid number keeps higher than normal but stable. Does the customer has any explanation for the increase in acid number? The rest of values are fine and within normal used oil limits so oil is fit for further use.

Comments: Acid Number (AN) is abnormally high.

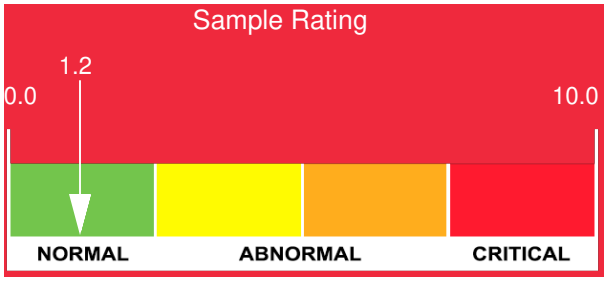
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
10/29/21	11/08/21	11.5y		381 / 194	23.3	33.0	0.39	0.282	684 / 362	804 / 429	912 / 489	5.47
11/24/20	12/02/20	10.5y		363 / 184	29.3	32.8	0.42	0.298	692 / 367	806 / 430	914 / 490	4.27
09/10/19	09/19/19	9.5y		414 / 212	23.6	33.2	0.786	0.281	704 / 373	818 / 437	926 / 497	2.68
01/23/18	01/29/18	8.0y		352 / 178	0.8	30.8	0.02	0.266	683 / 362	793 / 423	892 / 478	3.49
11/15/16	11/24/16	7.0y		351 / 177	43.9	32.6	0.249	0.114	682 / 361	807 / 430	923 / 495	4.74
Baseline Data				433 / 223		34.2	0.03		720 / 382	817 / 436	900 / 482	1.00

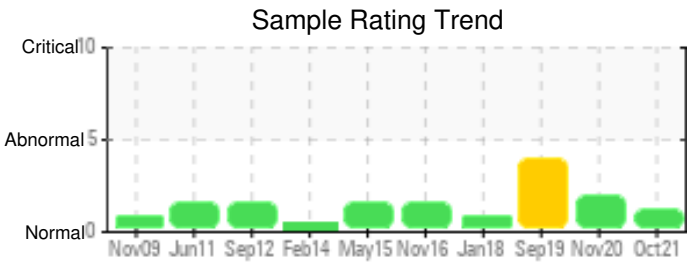






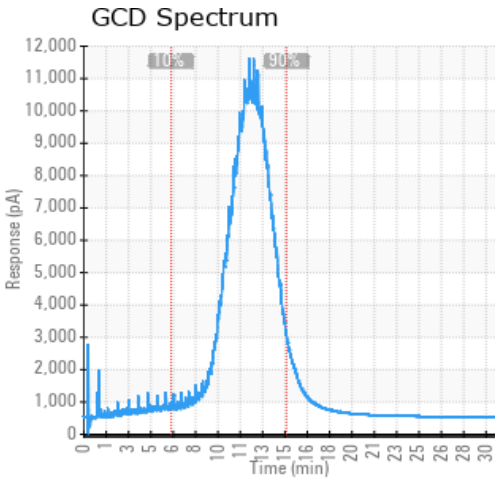
PETRO-CANADA LUBRICANTS

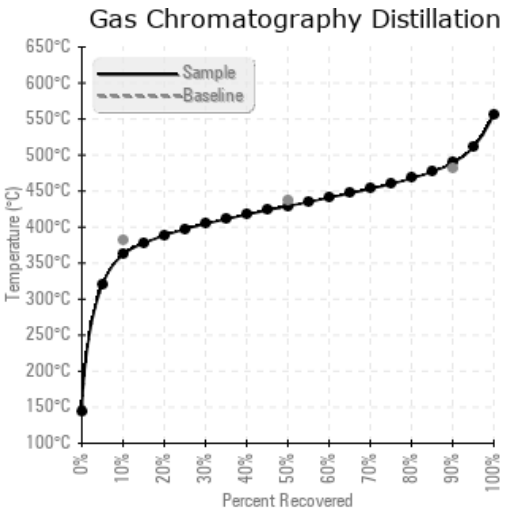


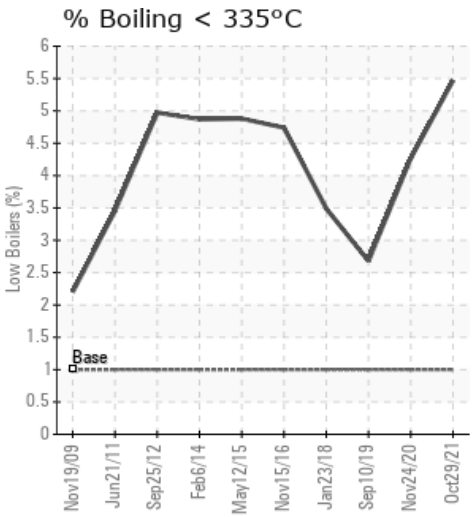


Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
10/29/21	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11/24/20	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
09/10/19	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01/23/18	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
11/15/16	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Baseline Data			0	0						0			0	0					0				0	

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







Historical Comments

11/24/20	Clarify high acid number. All other parameters show, that fluid is fit for further use. Acid Number (AN) is abnormally high. COC Flash Point is marginally low.
09/10/19	Acid Number high linked to degradation of fluid. Likely to increase over time and affect condition of the oil. Marginal increase in viscosity noted which is in line. Recommend monitoring with view to change in case of fast deterioration. Acid Number (AN) is severely high. (GCD) 90% Distillation Point is marginally high.
01/23/18	COC Flash point low, but in line with previous samples. Viscosity has dropped as has FBP (considerably). Has the system been treated, vented, between samples (lower acid number, water and other GCD parameters coming back in line)? Recommend venting as light ends build up looks to be happening, sample again following to establish if COC heads upwards. Insolubles higher showing evidence of fluid breakdown so must consider oil change in near future as the combination of a number of parameters are falling outside acceptable limits COC Flash Point is abnormally low.
11/15/16	Oil is fit for service. Suggest sample at next scheduled maintenance interval. COC Flash Point is abnormally low. (GCD) 90% Distillation Point is marginally high.