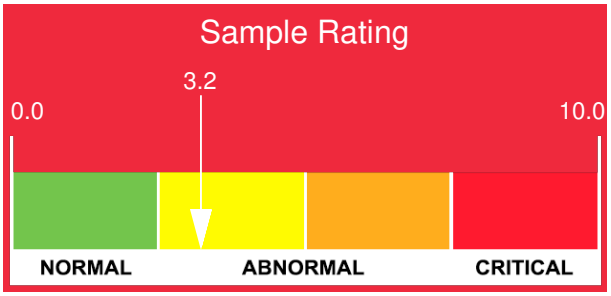
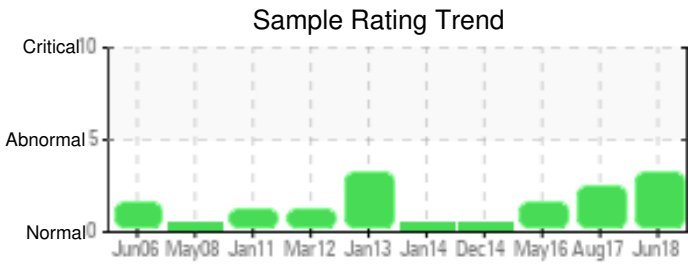




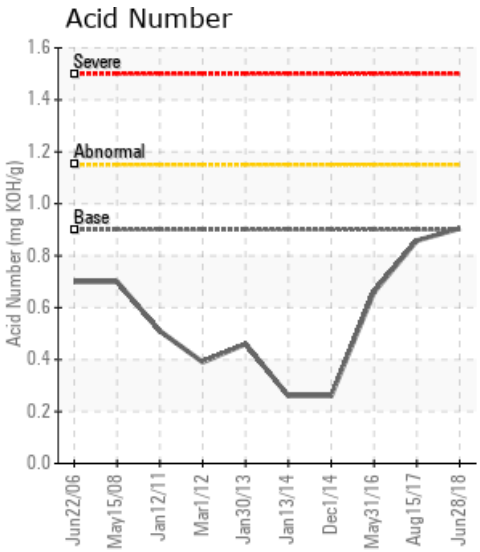
B150 GROEN

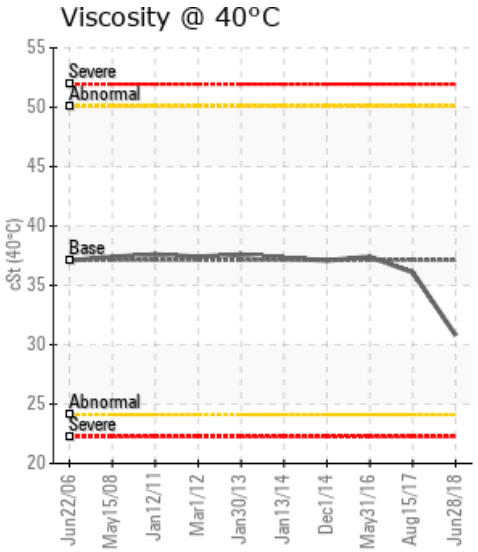
Customer: PTRHTF10078	System Information	Sample Information
WEST FORK CREATIONS 15 PEPSI DRIVE RED LODGE, MT 59068 USA Attn: JENNIFER BOTTORFF Tel: (406)446-3060 E-Mail: jenb@kingscupboard.com	System Volume: 55 gal Bulk Operating Temp: 475F / 246C Heating Source: Blanket: Fluid: PETRO CANADA PURITY FG HEAT TRANSFER FLUID Make: STERLCO	Lab No: 02229779 Analyst: Ron LeBlanc Sample Date: 06/28/18 Received Date: 07/23/18 Completed: 07/26/18 To discuss this report contact Ron LeBlanc at (541)678-7044

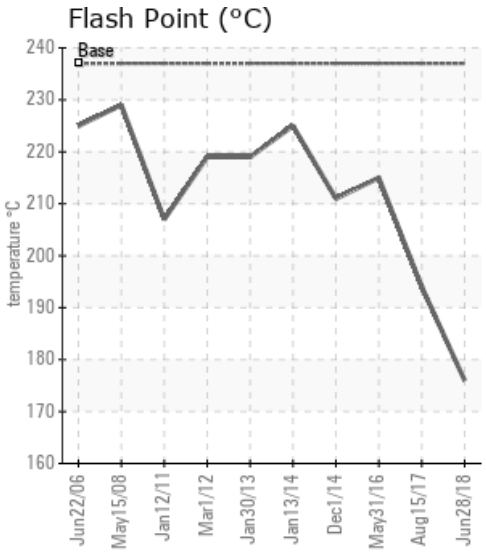
Recommendation: Pentane Insolubles levels are severely high. COC Flash Point is severely low. A small charge of new oil can bring the COC flash point up. Resample and purge extra oil out of sample port to get a good sample to confirm numbers.

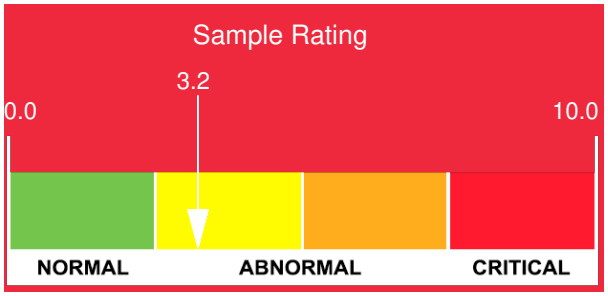
Comments: Pentane Insolubles levels are severely high. COC Flash Point is severely low.

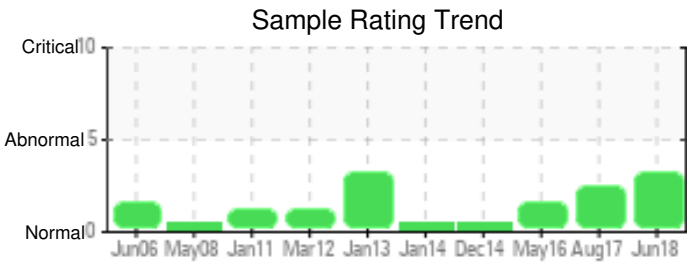
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
06/28/18	07/23/18	5y	OIL DRAIN	349 / 176	78.3	30.8	0.905	1.24	685 / 363	803 / 428	897 / 481	5.51
08/15/17	08/25/17	12y		381 / 194	137.7	36.1	0.858	2.70	701 / 372	808 / 431	901 / 483	3.70
05/31/16	06/09/16	10y	DRAIN PLUG	419 / 215	83.6	37.4	0.66	0.707	709 / 376	805 / 429	895 / 480	2.10
12/01/14	12/12/14	8y	DRAIN	412 / 211	18.6	37.1	0.26	0.102	724 / 384	817 / 436	911 / 488	0.65
01/13/14	01/23/14	9y	STERLCO	437 / 225	41.9	37.3	0.26	0.316	722 / 383	816 / 436	905 / 485	1.11
01/30/13	01/31/13	8y	DRAIN PLUG	426 / 219	80.9	37.6	0.46	0.096	717 / 381	809 / 432	910 / 488	1.39
Baseline Data				459 / 237		37.12	0.90		721 / 383	807 / 431	892 / 478	1.5





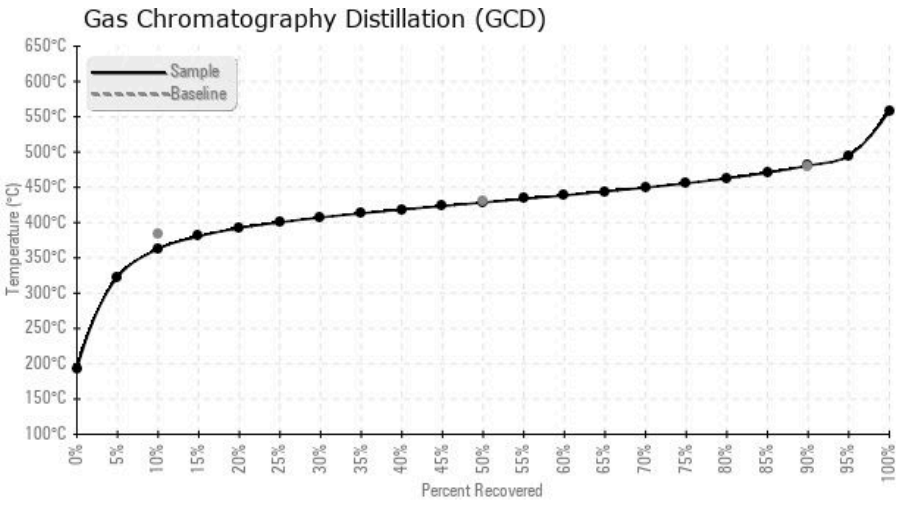


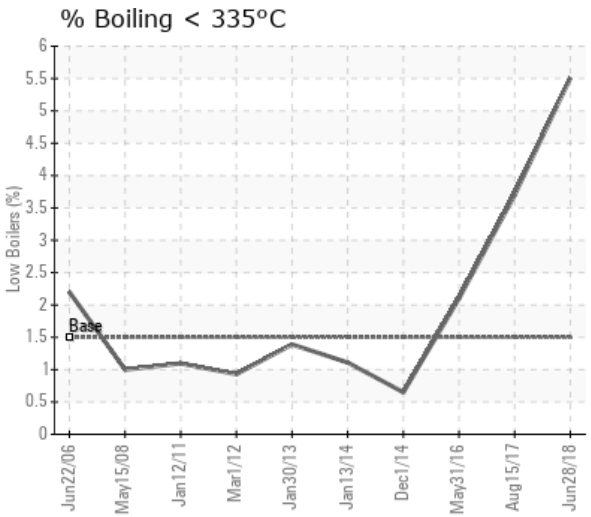




Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
06/28/18	6	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	84	6
08/15/17	17	0	0	0	1	1	1	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	92	18
05/31/16	12	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	93	17
12/01/14	11	0	0	0	0	2	0	0	0	0	3	1	0	0	0	0	0	0	0	4	1	0	109	52
01/13/14	7	0	0	0	2	2	0	0	0	0	2	0	0	0	0	0	0	0	0	3	0	0	98	37
01/30/13	10	0	0	0	5	4	0	0	0	0	4	1	0	0	0	0	0	0	0	6	0	0	109	73
Baseline Data			0	0						0			0	0					0				230	

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





Historical Comments

08/15/17	Pentane insoluble have increased significantly. Determine entry point. Check filtration if equipped. Make sure sample was taken properly. Let the oil run freely for a short amount of time before capturing in container. Pentane Insolubles levels are severely high. COC Flash Point is marginally low.
05/31/16	Sample is in good condition but the pentane insolubles are high which is an indication of oxidation and sludging may be occurring. Re-sample at the next maintenance interval. Pentane Insolubles levels are severely high.
12/01/14	Zinc is fluctuating between samples. Determine the origin of Zn. . H20 is lower on this sample. TAN has stayed stable in the last 2 samples. Continue to sample oil at normal interval. Zinc ppm levels are severely high.
01/13/14	Based on the results, the oil properties remain unchanged. Keep up the good work and re-sample same time next year. Zinc ppm levels are abnormally high.
01/30/13	The oil condition appears to be satisfactory for further service. Please sample at least every year. We would welcome twice per year if feasible. Zinc ppm levels are severely high. (GCD) 90% Distillation Point is marginally low.