



OIL ANALYSIS REPORT

Sample Rating Trend

GLYCOL



Machine Id
KUBOTA ZD 1211 48572
 Component
Diesel Engine
 Fluid
NOT GIVEN (--- GAL)



DIAGNOSIS

Recommendation

Taking the sample cold limits the accuracy of our diagnosis. We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

Metal levels are typical for a new component breaking in.

Contamination

Test for glycol is positive. There is a high concentration of glycol present in the oil. There is a moderate concentration of water present in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0745317	---	---
Sample Date	Client Info		01 Oct 2023	---	---
Machine Age	hrs	Client Info	445	---	---
Oil Age	hrs	Client Info	0	---	---
Oil Changed	Client Info		N/A	---	---
Sample Status			SEVERE	---	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	---	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	44	---
Chromium	ppm	ASTM D5185(m)	>20	<1	---
Nickel	ppm	ASTM D5185(m)	>4	<1	---
Titanium	ppm	ASTM D5185(m)		0	---
Silver	ppm	ASTM D5185(m)	>3	<1	---
Aluminum	ppm	ASTM D5185(m)	>20	3	---
Lead	ppm	ASTM D5185(m)	>40	<1	---
Copper	ppm	ASTM D5185(m)	>330	8	---
Tin	ppm	ASTM D5185(m)	>15	0	---
Antimony	ppm	ASTM D5185(m)		0	---
Vanadium	ppm	ASTM D5185(m)		0	---
Beryllium	ppm	ASTM D5185(m)		0	---
Cadmium	ppm	ASTM D5185(m)		0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		7	---
Barium	ppm	ASTM D5185(m)		<1	---
Molybdenum	ppm	ASTM D5185(m)		4	---
Manganese	ppm	ASTM D5185(m)		0	---
Magnesium	ppm	ASTM D5185(m)		30	---
Calcium	ppm	ASTM D5185(m)		1834	---
Phosphorus	ppm	ASTM D5185(m)		555	---
Zinc	ppm	ASTM D5185(m)		920	---
Sulfur	ppm	ASTM D5185(m)		2369	---
Lithium	ppm	ASTM D5185(m)		<1	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	19	---
Sodium	ppm	ASTM D5185(m)		17	---
Potassium	ppm	ASTM D5185(m)	>20	658	---
Glycol	%	ASTM D7922*		0.608	---

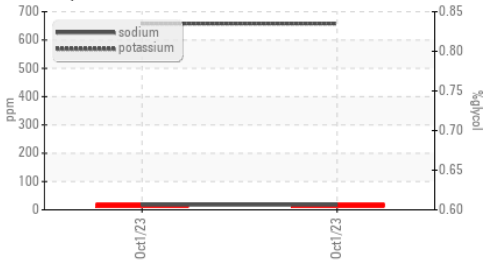
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	1.4	---
Nitration	Abs/cm	ASTM D7624*	>20	122.4	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	27.6	---



OIL ANALYSIS REPORT

Glycol Contamination



FLUID DEGRADATION

Method	Limit/Base	Current	History1	History2
Oxidation (Abs./1mm, ASTM D7414*)	>25	136.4	---	---
Base Number (BN) (mg KOH/g, ASTM D2896*)		6.87	---	---

VISUAL

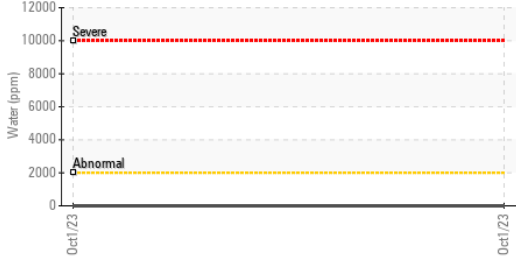
Method	Limit/Base	Current	History1	History2
Emulsified Water (scalar, Visual*)	>0.2	▲ 1%	---	---
Free Water (scalar, Visual*)		NEG	---	---

FLUID PROPERTIES

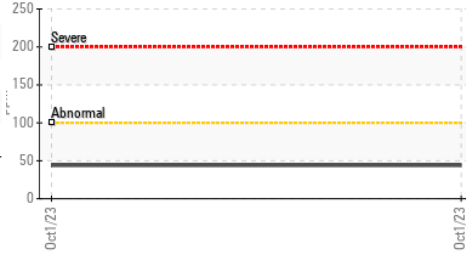
Method	Limit/Base	Current	History1	History2
Visc @ 100°C (cSt, ASTM D7279(m))		16.2	---	---

GRAPHS

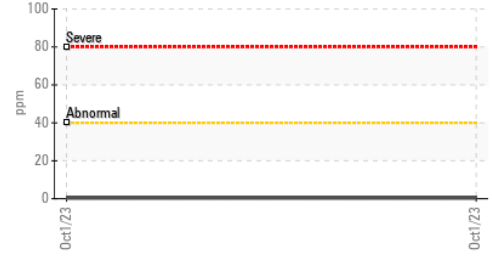
Water (KF)



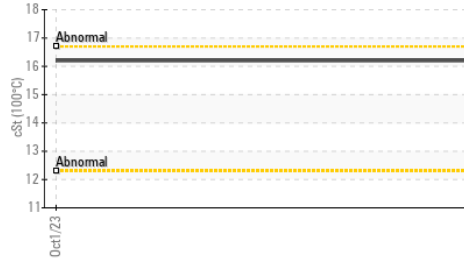
Iron (ppm)



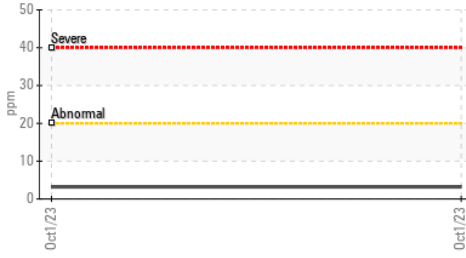
Lead (ppm)



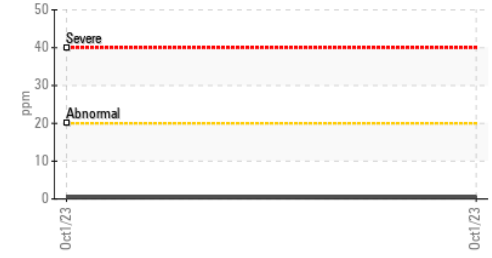
Viscosity @ 100°C



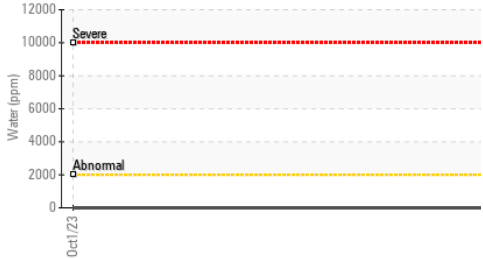
Aluminum (ppm)



Chromium (ppm)



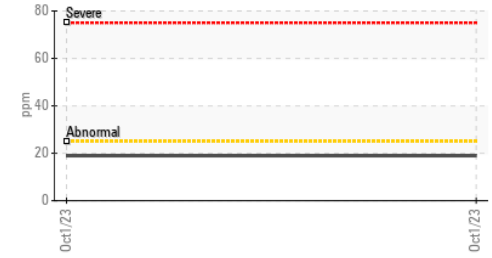
Water (KF)



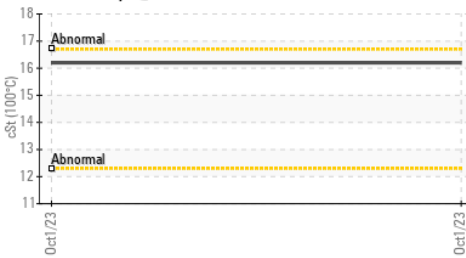
Copper (ppm)



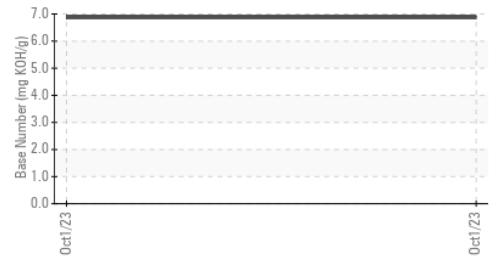
Silicon (ppm)



Viscosity @ 100°C



Base Number



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **BENBERG FARM AND INDUSTRIAL EQUIPMENT**
Sample No. : WC0745317 **Received** : 04 Oct 2023 42134 HWY 3, R.R. #3
Lab Number : 02586642 **Diagnosed** : 05 Oct 2023 WAINFLEET, ON
Unique Number : 5655708 **Diagnostician** : Kevin Marson CA L0S 1V0
Test Package : MOB 2 (Additional Tests: Glycol, KF)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

Contact: Spencer Woods
 swoods@benberg.com
 T: (905)899-3405
 F: (905)899-3885