



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	ABNORMAL

Area
BEANFIELD TECHNOLOGIES [154968]

Machine Id
J220155854

Component
Diesel Engine

Fluid
VALVOLINE PREMIUM BLUE EXTREME 5W40 (--- GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		CU0022788	---	---
Sample Date		Client Info		02 May 2024	---	---
Machine Age	hrs	Client Info		18	---	---
Oil Age	hrs	Client Info		1	---	---
Filter Age	hrs	Client Info		1	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>90	6	---	---
Chromium	ppm	ASTM D5185(m)	>20	0	---	---
Nickel	ppm	ASTM D5185(m)	>2	0	---	---
Titanium	ppm	ASTM D5185(m)	>2	0	---	---
Silver	ppm	ASTM D5185(m)	>2	0	---	---
Aluminum	ppm	ASTM D5185(m)	>20	9	---	---
Lead	ppm	ASTM D5185(m)	>40	0	---	---
Copper	ppm	ASTM D5185(m)	>330	5	---	---
Tin	ppm	ASTM D5185(m)	>15	0	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

Test for glycol is positive. There is a light concentration of glycol present in the oil. Tests indicate that there is no fuel present in the oil. The water content is negligible.

Silicon	ppm	ASTM D5185(m)	>25	43	---	---
Potassium	ppm	ASTM D5185(m)	>20	1	---	---
Fuel	%	ASTM D7593*	>3.0	0.0	---	---
Water	%	ASTM D6304*	>0.2	0.040	---	---
ppm Water	ppm	ASTM D6304*	>2000	408	---	---
Glycol	%	ASTM D7922*		▲ 0.012	---	---
Soot %	%	ASTM D7844*	>6	0.5	---	---
Nitration	Abs/cm	ASTM D7624*	>20	4.0	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	17.0	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	VLITE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	---	---
Emulsified Water	scalar	Visual*	>0.2	.2%	---	---

FLUID CONDITION

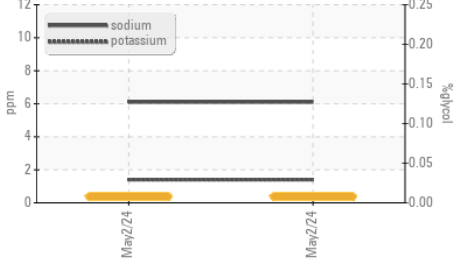
Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The condition of the oil is acceptable for the time in service. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		6	---	---
Boron	ppm	ASTM D5185(m)		74	---	---
Barium	ppm	ASTM D5185(m)		10	---	---
Molybdenum	ppm	ASTM D5185(m)		206	---	---
Manganese	ppm	ASTM D5185(m)		1	---	---
Magnesium	ppm	ASTM D5185(m)		361	---	---
Calcium	ppm	ASTM D5185(m)		1216	---	---
Phosphorus	ppm	ASTM D5185(m)		528	---	---
Zinc	ppm	ASTM D5185(m)		701	---	---
Sulfur	ppm	ASTM D5185(m)		1560	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	13.0	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	14.5	▲ 10.7	---	---

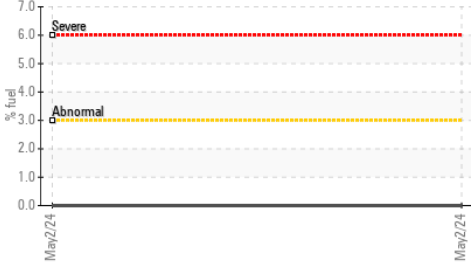
▲ Viscosity @ 100°C



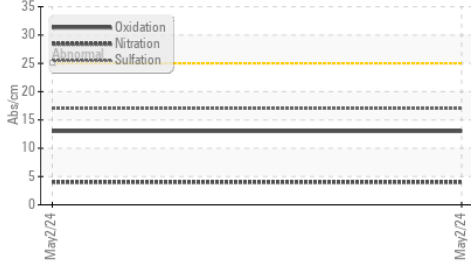
▲ Glycol Contamination



Fuel Dilution



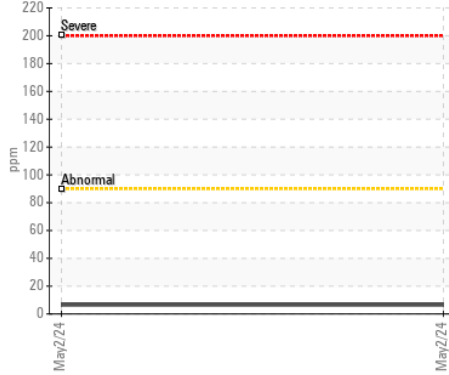
FT-IR (Direct Trend)



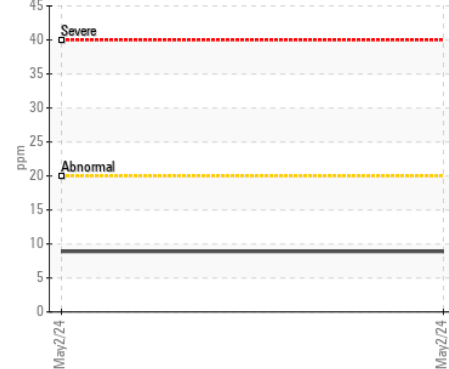
Water (KF)



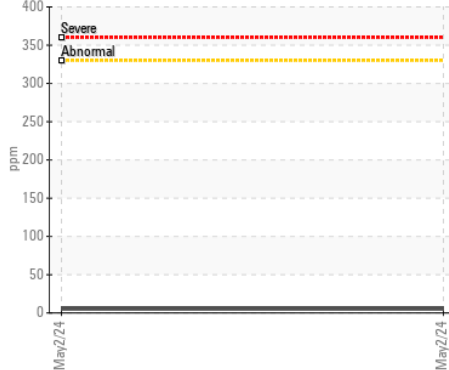
Iron (ppm)



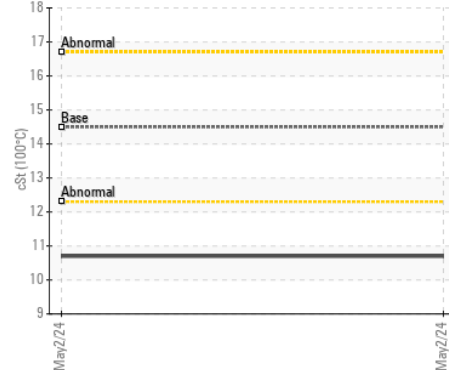
Aluminum (ppm)



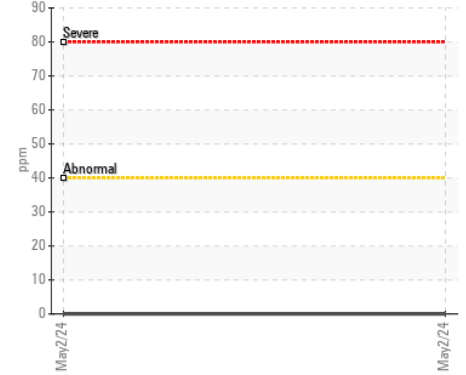
Copper (ppm)



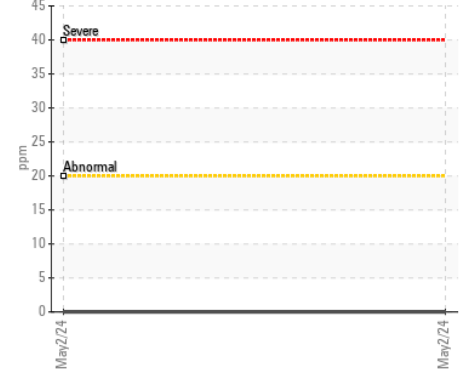
▲ Viscosity @ 100°C



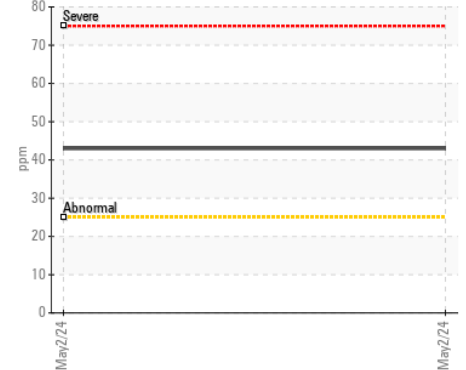
Lead (ppm)



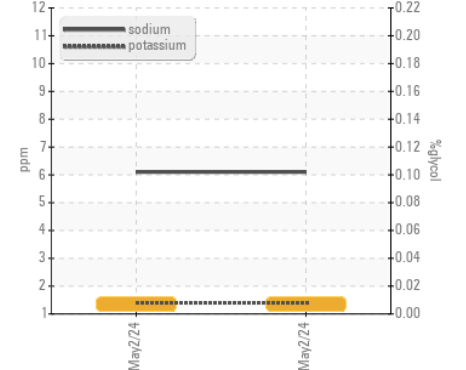
Chromium (ppm)



Silicon (ppm)



▲ Glycol Contamination



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **CUMMINS CANADA ULC - GENERATOR DIVISION**
Sample No. : CU0022788 **Received** : 10 Jun 2024 **7175 PACIFIC CIRCLE**
Lab Number : 02640731 **Tested** : 11 Jun 2024 **MISSISSAUGA, ON**
Unique Number : 5789893 **Diagnosed** : 12 Jun 2024 - Kevin Marson **CA L5T 2A5**
Test Package : MOB 1 (Additional Tests: FuelDilution, Glycol, KF, PercentFuel, Visual) **Contact: Elisia Johnson**
elisia.johnson@cummins.com

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.

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