



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
9459
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0853312	WC0796622	WC0796647
Sample Date		Client Info		28 Feb 2024	27 May 2023	01 Apr 2023
Machine Age	kms	Client Info		403177	336746	299837
Oil Age	kms	Client Info		0	0	0
Filter Age	kms	Client Info		0	0	0
Oil Changed		Client Info		Not Changed	Changed	Changed
Filter Changed		Client Info		Not Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>90	30	12	26
Chromium	ppm	ASTM D5185(m)	>20	1	<1	2
Nickel	ppm	ASTM D5185(m)	>2	<1	0	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	<1
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	5	2	4
Lead	ppm	ASTM D5185(m)	>40	1	<1	4
Copper	ppm	ASTM D5185(m)	>330	1	<1	<1
Tin	ppm	ASTM D5185(m)	>15	<1	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

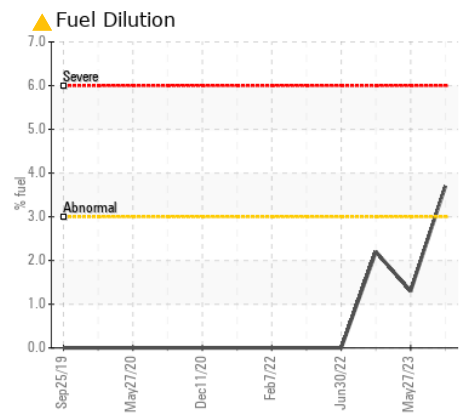
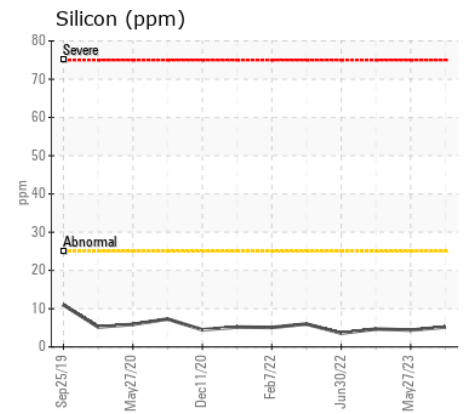
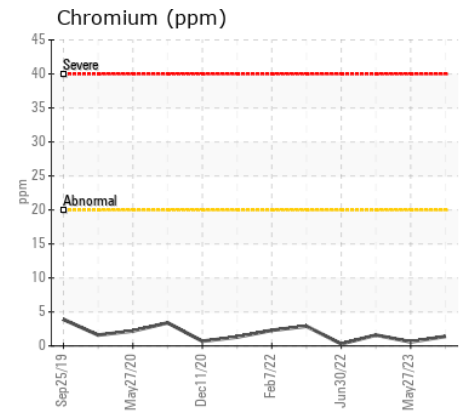
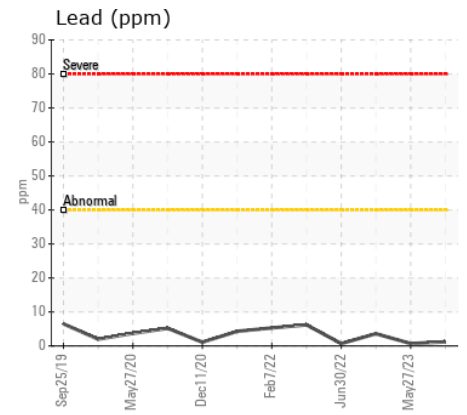
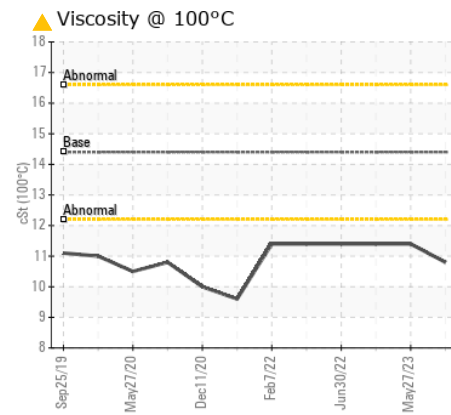
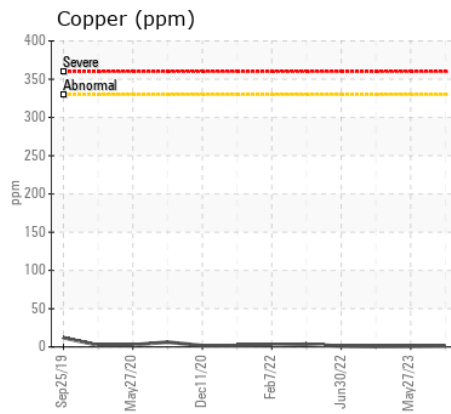
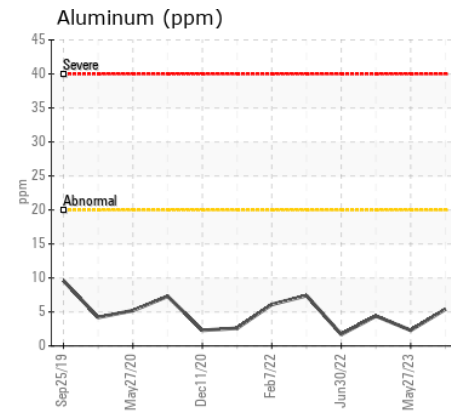
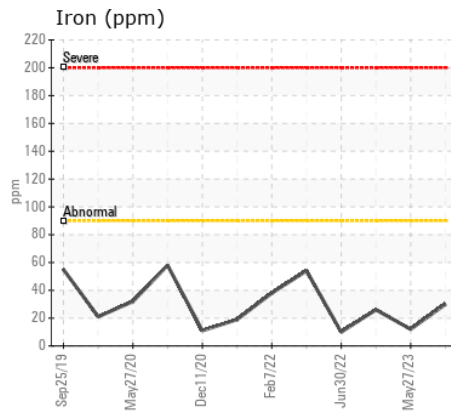
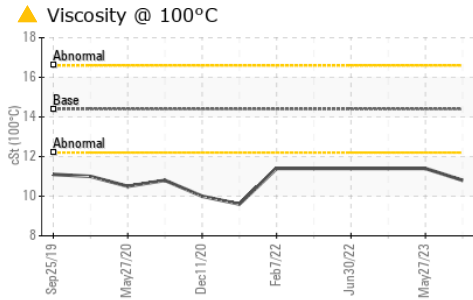
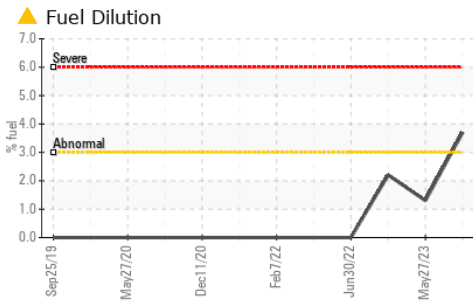
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>25	5	4	5
Potassium	ppm	ASTM D5185(m)	>20	11	5	0
Fuel	%	ASTM D7593*	>3.0	▲ 3.7	▲ 1.3	▲ 2.2
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>6	0.4	0.1	0.2
Nitration	Abs/cm	ASTM D7624*	>20	10.8	9.2	11.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	23.2	19.7	29.0
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)	>158	3	3	4
Boron	ppm	ASTM D5185(m)	250	29	59	25
Barium	ppm	ASTM D5185(m)	10	0	0	0
Molybdenum	ppm	ASTM D5185(m)	100	<1	2	2
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)	450	716	723	813
Calcium	ppm	ASTM D5185(m)	3000	1307	1385	1518
Phosphorus	ppm	ASTM D5185(m)	1150	680	733	801
Zinc	ppm	ASTM D5185(m)	1350	753	758	847
Sulfur	ppm	ASTM D5185(m)	4250	2562	2531	2672
Oxidation	Abs/.1mm	ASTM D7414*	>25	18.5	15.0	21.7
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	▲ 10.8	▲ 11.4	▲ 11.4



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0853312 **Received** : 05 Mar 2024
Lab Number : 02619891 **Tested** : 06 Mar 2024
Unique Number : 5737001 **Diagnosed** : 06 Mar 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

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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