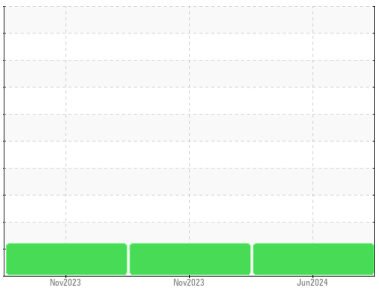
OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Machine Id
7503
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

DIAGNOSIS

Recommendation
The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Wear
All component wear rates are normal.

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. Light fuel dilution occurring. No other contaminants were detected in the oil.

Fluid Condition
The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0924246**	WC0853083	WC0796585
Sample Date		Client Info		**22 Jun 2024**	17 Nov 2023	16 Nov 2023
Machine Age	kms	Client Info		**332430**	41455	70706
Oil Age	kms	Client Info		**0**	0	0
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>90	**41**	54	25
Chromium	ppm	ASTM D5185(m)	>20	**1**	2	<1
Nickel	ppm	ASTM D5185(m)	>2	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	**0**	0	0
Silver	ppm	ASTM D5185(m)	>2	**<1**	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	**9**	14	14
Lead	ppm	ASTM D5185(m)	>40	**0**	7	<1
Copper	ppm	ASTM D5185(m)	>330	**3**	24	3
Tin	ppm	ASTM D5185(m)	>15	**0**	3	0
Antimony	ppm	ASTM D5185(m)		**0**	0	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	250	**27**	41	45
Barium	ppm	ASTM D5185(m)	10	**0**	5	0
Molybdenum	ppm	ASTM D5185(m)	100	**3**	62	2
Manganese	ppm	ASTM D5185(m)		**<1**	5	0
Magnesium	ppm	ASTM D5185(m)	450	**681**	419	717
Calcium	ppm	ASTM D5185(m)	3000	**1233**	1639	1322
Phosphorus	ppm	ASTM D5185(m)	1150	**619**	928	652
Zinc	ppm	ASTM D5185(m)	1350	**727**	1122	730
Sulfur	ppm	ASTM D5185(m)	4250	**2301**	2446	2566
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**7**	37	5
Sodium	ppm	ASTM D5185(m)	>158	**3**	4	3
Potassium	ppm	ASTM D5185(m)	>20	**14**	43	18
Fuel	%	ASTM D7593*	>3.0	▲ **2.5**	▲ 3.2	▲ 2.1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>6	**1**	0.2	0.1
Nitration	Abs/cm	ASTM D7624*	>20	**13.6**	9.8	10.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	**27.4**	23.5	21.3

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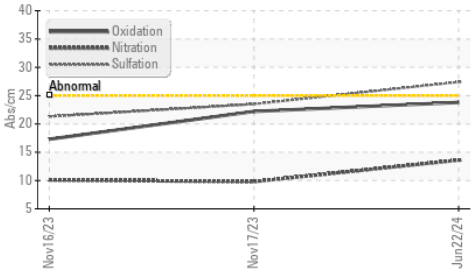
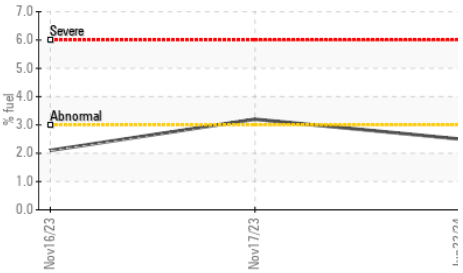
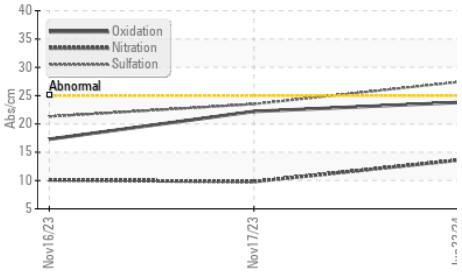
FT-IR (Direct Trend)



Fuel Dilution



FT-IR (Direct Trend)



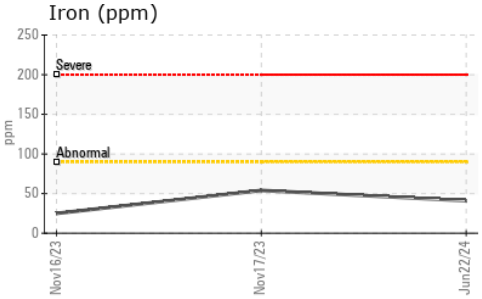
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**23.8**	22.2	17.3

VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

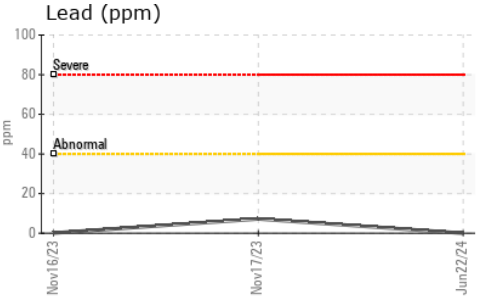
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	▲ **11.3**	▲ 11.1	▲ 10.8

GRAPHS

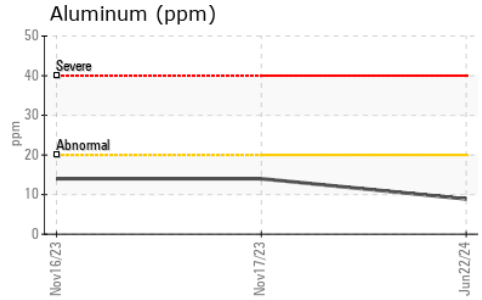
Iron (ppm)



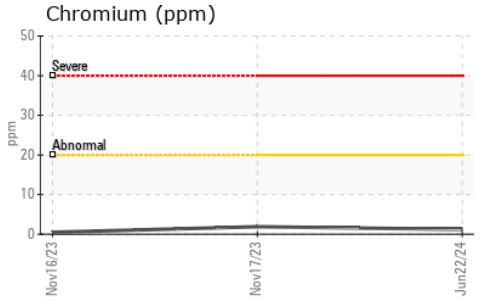
Lead (ppm)



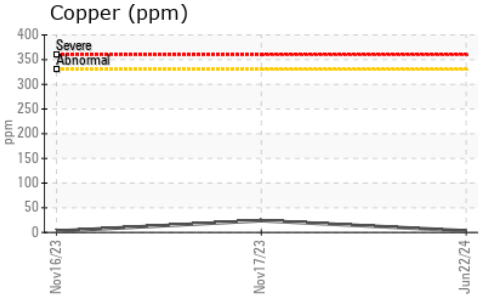
Aluminum (ppm)



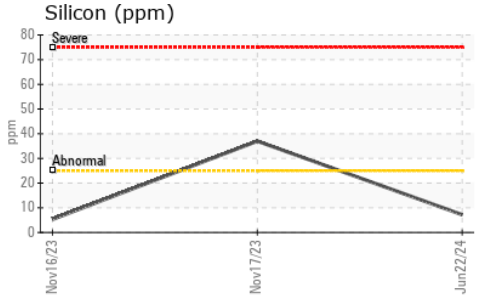
Chromium (ppm)



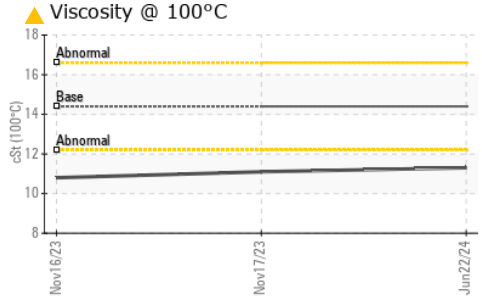
Copper (ppm)



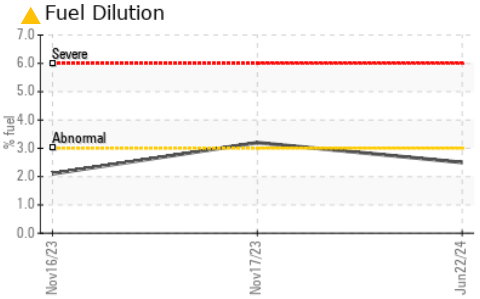
Silicon (ppm)



▲ Viscosity @ 100°C



▲ Fuel Dilution



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0924246 **Received** : 25 Jun 2024
Lab Number : 02643891 **Tested** : 26 Jun 2024
Unique Number : 5801430 **Diagnosed** : 26 Jun 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: 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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