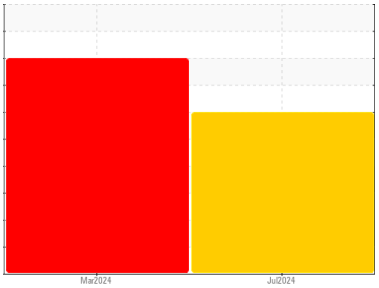
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
[69673]
Machine Id
VOLVO VNR660 4612
Component
Diesel Engine
Fluid
PETRO CANADA DURON SAE 10W30 (--- GAL)

DIAGNOSIS

▲ Recommendation
The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

▲ Wear
Nickel ppm levels are severe. Exhaust valve wear is indicated.

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 no indication of any contamination in the oil.

Fluid Condition
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0948206**	WC0909048	---
Sample Date		Client Info		**12 Jul 2024**	14 Mar 2024	---
Machine Age	mths	Client Info		**31**	279690	---
Oil Age	mths	Client Info		**4**	174005	---
Oil Changed		Client Info		**Changed**	Changed	---
Sample Status				**SEVERE**	SEVERE	---

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>6.0	**<1.0**	0.9	---
Water		WC Method	>0.2	**NEG**	NEG	---
Glycol		WC Method		**NEG**	NEG	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	**52**	▲ 176	---
Chromium	ppm	ASTM D5185(m)	>20	**1**	3	---
Nickel	ppm	ASTM D5185(m)	>2	▲ **11**	▲ 21	---
Titanium	ppm	ASTM D5185(m)		**0**	0	---
Silver	ppm	ASTM D5185(m)	>2	**<1**	<1	---
Aluminum	ppm	ASTM D5185(m)	>25	**4**	14	---
Lead	ppm	ASTM D5185(m)	>40	**1**	5	---
Copper	ppm	ASTM D5185(m)	>330	**15**	61	---
Tin	ppm	ASTM D5185(m)	>15	**1**	4	---
Antimony	ppm	ASTM D5185(m)		**<1**	0	---
Vanadium	ppm	ASTM D5185(m)		**0**	0	---
Beryllium	ppm	ASTM D5185(m)		**0**	0	---
Cadmium	ppm	ASTM D5185(m)		**0**	0	---

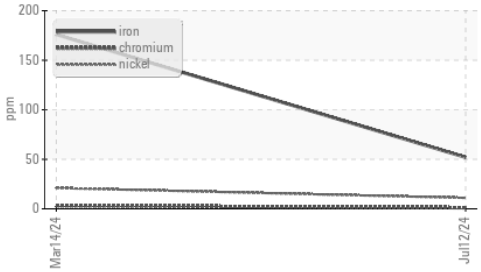
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	1	**1**	7	---
Barium	ppm	ASTM D5185(m)	1	**<1**	0	---
Molybdenum	ppm	ASTM D5185(m)	1	**62**	65	---
Manganese	ppm	ASTM D5185(m)	1	**1**	4	---
Magnesium	ppm	ASTM D5185(m)	10	**932**	877	---
Calcium	ppm	ASTM D5185(m)	2942	**1123**	1388	---
Phosphorus	ppm	ASTM D5185(m)	1102	**844**	957	---
Zinc	ppm	ASTM D5185(m)	1351	**1202**	1125	---
Sulfur	ppm	ASTM D5185(m)	3903	**2289**	2071	---
Lithium	ppm	ASTM D5185(m)		**<1**	<1	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**6**	15	---
Sodium	ppm	ASTM D5185(m)		**2**	4	---
Potassium	ppm	ASTM D5185(m)	>20	**6**	25	---

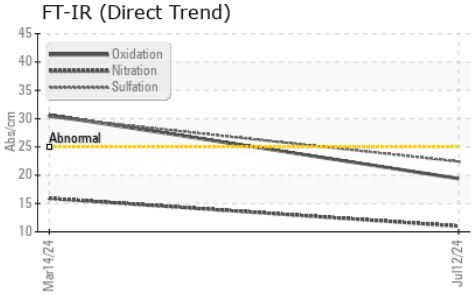
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0.6**	1.3	---
Nitration	Abs/cm	ASTM D7624*	>20	**11.0**	15.9	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	**22.4**	30.3	---

OIL ANALYSIS REPORT

Ferrous Alloys



FT-IR (Direct Trend)



Viscosity @ 100°C

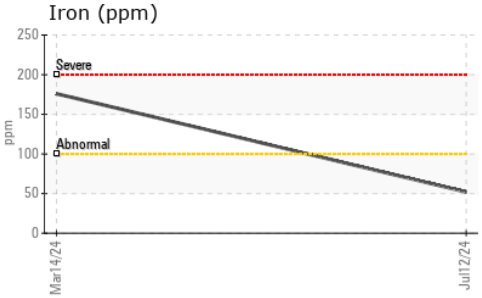
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**19.4**	▲ 30.6	---

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

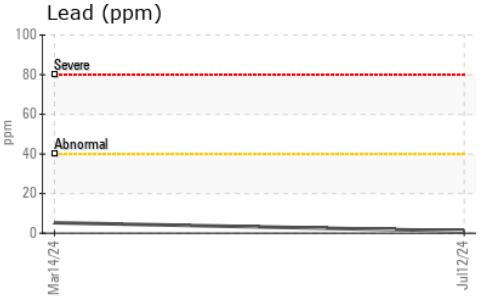
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	11.4	**11.4**	11.4	---

GRAPHS

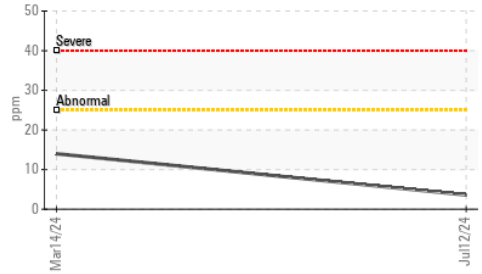
Iron (ppm)



Lead (ppm)

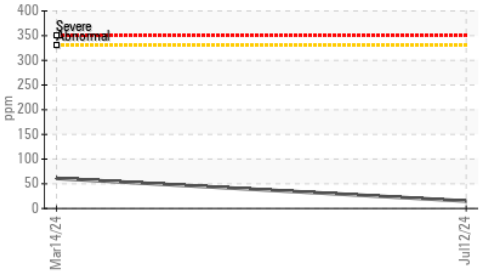


Aluminum (ppm)

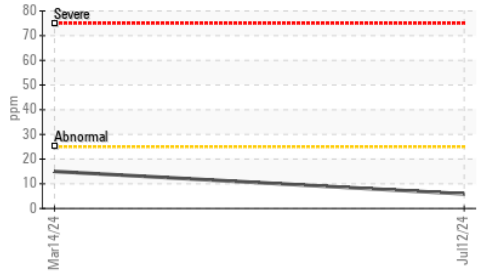


Chromium (ppm)

Copper (ppm)

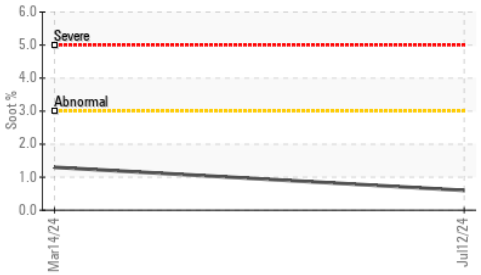


Silicon (ppm)



Viscosity @ 100°C

Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0948206
Lab Number : 02648068
Unique Number : 5813620
Test Package : MOB 1

Received : 16 Jul 2024
Tested : 16 Jul 2024
Diagnosed : 16 Jul 2024 - Kevin Marson

PERFORMANCE EQUIPMENT - VISION TRUCK
415 EVANS AVENUE
ETOBICOKE, ON
CA M8W 0B3
Contact: Service
etobservice@visiontruckgroup.com
T:
F:

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.