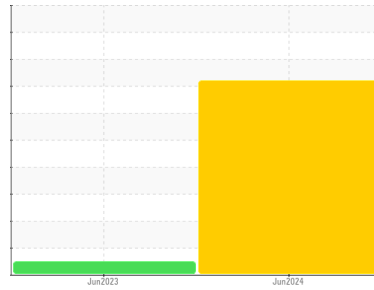




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Area
[69112]
 Machine Id
VOLVO VNL 4611
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SAE 10W30 (--- GAL)

DIAGNOSIS

▲ Recommendation

We advise that you check for visible metal particles in the oil. 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. Light concentration of visible metal present. 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		WC0948232	WC0816595	---
Sample Date	Client Info		14 Jun 2024	10 Jun 2023	---
Machine Age	kms	Client Info	320009	192247	---
Oil Age	kms	Client Info	0	0	---
Oil Changed	Client Info		Changed	Changed	---
Sample Status			SEVERE	NORMAL	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>6.0	<1.0	<1.0	---
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	72	75
Chromium	ppm	ASTM D5185(m)	>20	1	1
Nickel	ppm	ASTM D5185(m)	>2	▲ 7	2
Titanium	ppm	ASTM D5185(m)		0	<1
Silver	ppm	ASTM D5185(m)	>2	<1	<1
Aluminum	ppm	ASTM D5185(m)	>25	7	7
Lead	ppm	ASTM D5185(m)	>40	2	3
Copper	ppm	ASTM D5185(m)	>330	28	43
Tin	ppm	ASTM D5185(m)	>15	2	3
Antimony	ppm	ASTM D5185(m)		0	<1
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	4	33
Barium	ppm	ASTM D5185(m)	1	<1	0
Molybdenum	ppm	ASTM D5185(m)	1	58	53
Manganese	ppm	ASTM D5185(m)	1	2	3
Magnesium	ppm	ASTM D5185(m)	10	840	718
Calcium	ppm	ASTM D5185(m)	2942	1237	1042
Phosphorus	ppm	ASTM D5185(m)	1102	855	932
Zinc	ppm	ASTM D5185(m)	1351	1121	914
Sulfur	ppm	ASTM D5185(m)	3903	2015	4397
Lithium	ppm	ASTM D5185(m)		<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	8	12
Sodium	ppm	ASTM D5185(m)		4	4
Potassium	ppm	ASTM D5185(m)	>20	8	16

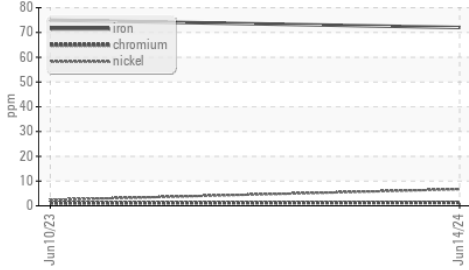
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0.9	0.7
Nitration	Abs/cm	ASTM D7624*	>20	12.4	11.3
Sulfation	Abs./1mm	ASTM D7415*	>30	24.8	27.9

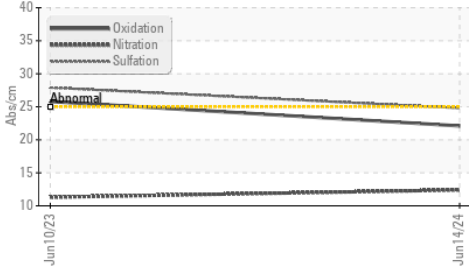


OIL ANALYSIS REPORT

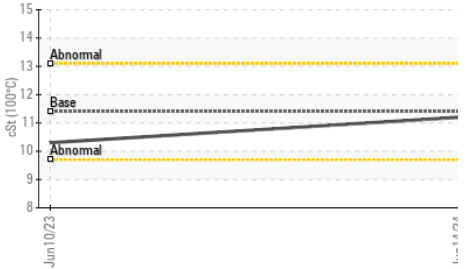
▲ Ferrous Alloys



FT-IR (Direct Trend)



Viscosity @ 100°C



FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	22.1	25.8

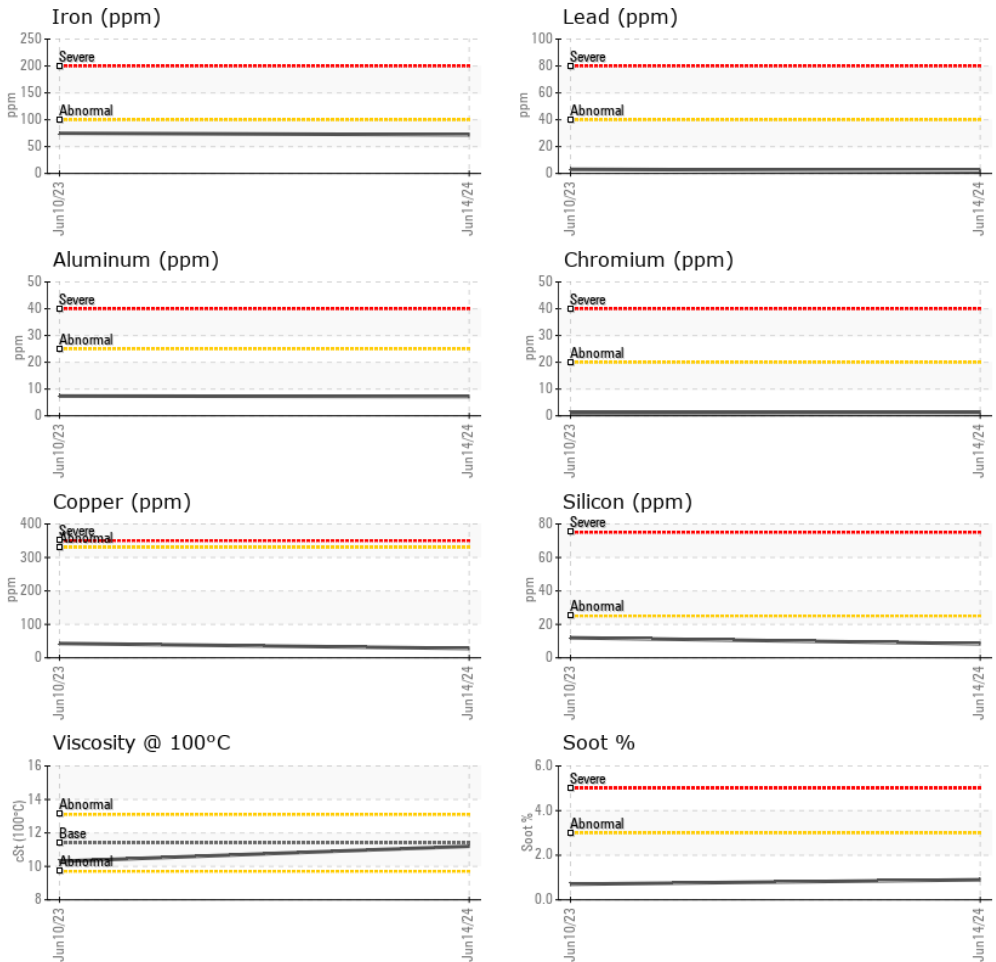
VISUAL

	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	▲ LIGHT	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
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	11.2	10.3

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **PERFORMANCE EQUIPMENT - VISION TRUCK**
Sample No. : WC0948232 **Received** : 08 Jul 2024 **415 EVANS AVENUE**
Lab Number : 02646101 **Tested** : 11 Jul 2024 **ETOBICOKE, ON**
Unique Number : 5811653 **Diagnosed** : 11 Jul 2024 - Kevin Marson **CA M8W 0B3**
Test Package : MOB 1 (Additional Tests: Bottom, BottomAnalysis, FILTERPATCH, Visual) **Contact: Service**
etobservice@visiontruckgroup.com

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