



# OIL ANALYSIS REPORT

Sample Rating Trend

**WEAR**



Area  
**[63949]**  
Machine Id  
**VOLVO VNL 4491**

Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 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

Iron ppm levels are abnormal. Cylinder, crank, or cam shaft 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		<b>WC0869675</b>	---	---
Sample Date	Client Info		<b>30 Nov 2023</b>	---	---
Machine Age	kms	Client Info	<b>641472</b>	---	---
Oil Age	kms	Client Info	<b>0</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>ABNORMAL</b>	---	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>6.0	<b>&lt;1.0</b>	---	---
Water	WC Method	>0.2	<b>NEG</b>	---	---
Glycol	WC Method		<b>NEG</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*		<b>0</b>	---	---
Iron	ppm	ASTM D5185(m) >100	<b>▲ 120</b>	---	---
Chromium	ppm	ASTM D5185(m) >20	<b>2</b>	---	---
Nickel	ppm	ASTM D5185(m) >2	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185(m)	<b>0</b>	---	---
Silver	ppm	ASTM D5185(m) >2	<b>&lt;1</b>	---	---
Aluminum	ppm	ASTM D5185(m) >25	<b>8</b>	---	---
Lead	ppm	ASTM D5185(m) >40	<b>2</b>	---	---
Copper	ppm	ASTM D5185(m) >330	<b>14</b>	---	---
Tin	ppm	ASTM D5185(m) >15	<b>1</b>	---	---
Antimony	ppm	ASTM D5185(m)	<b>0</b>	---	---
Vanadium	ppm	ASTM D5185(m)	<b>0</b>	---	---
Beryllium	ppm	ASTM D5185(m)	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185(m)	<b>0</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 2	<b>2</b>	---	---
Barium	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	---	---
Molybdenum	ppm	ASTM D5185(m) 50	<b>63</b>	---	---
Manganese	ppm	ASTM D5185(m) 0	<b>1</b>	---	---
Magnesium	ppm	ASTM D5185(m) 950	<b>972</b>	---	---
Calcium	ppm	ASTM D5185(m) 1050	<b>1092</b>	---	---
Phosphorus	ppm	ASTM D5185(m) 995	<b>976</b>	---	---
Zinc	ppm	ASTM D5185(m) 1180	<b>1253</b>	---	---
Sulfur	ppm	ASTM D5185(m) 2600	<b>2059</b>	---	---
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	---	---

## CONTAMINANTS

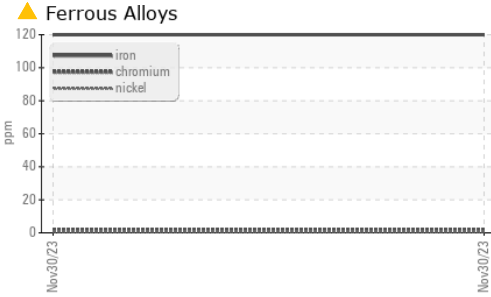
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	<b>16</b>	---	---
Sodium	ppm	ASTM D5185(m)	<b>4</b>	---	---
Potassium	ppm	ASTM D5185(m) >20	<b>8</b>	---	---

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	<b>1.4</b>	---	---
Nitration	Abs/cm	ASTM D7624* >20	<b>12.9</b>	---	---
Sulfation	Abs.1mm	ASTM D7415* >30	<b>27.5</b>	---	---



# OIL ANALYSIS REPORT



FLUID DEGRADATION	method	limit/base	current	history1	history2
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Oxidation	Abs./1mm	ASTM D7414*	>25	<b>23.9</b>	---	---
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VISUAL	method	limit/base	current	history1	history2
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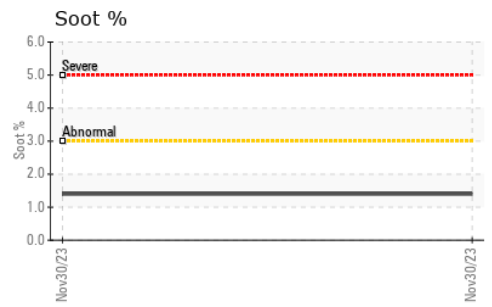
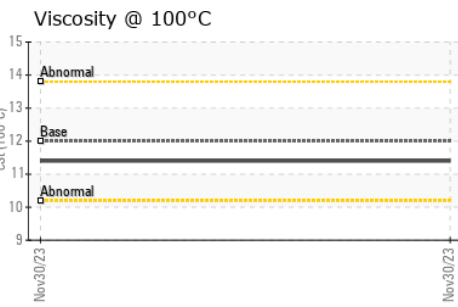
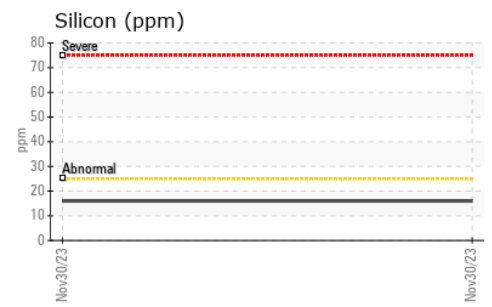
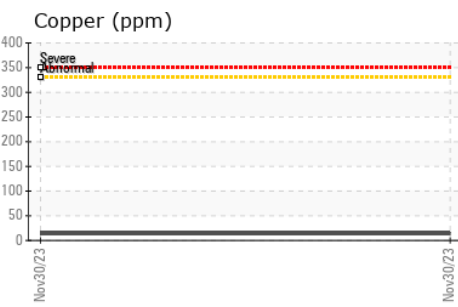
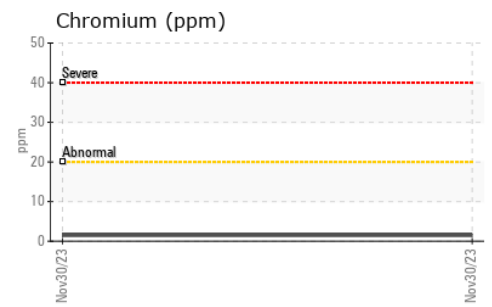
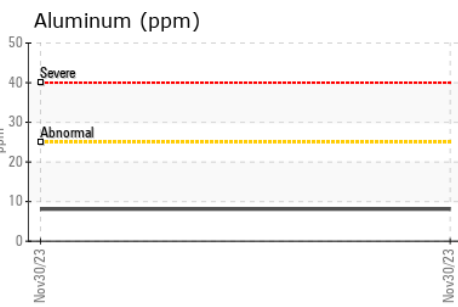
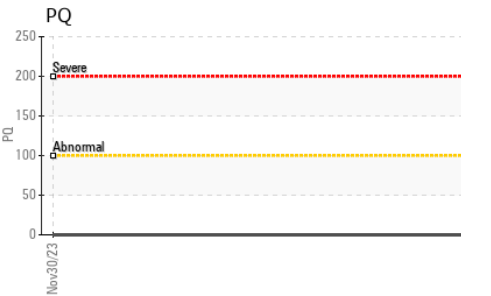
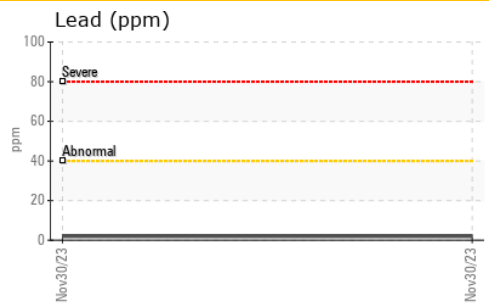
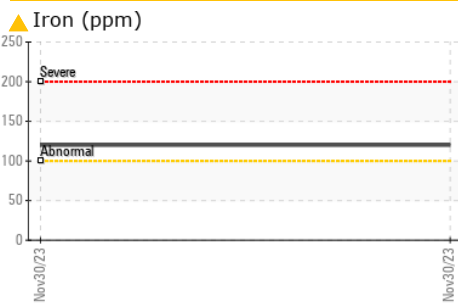
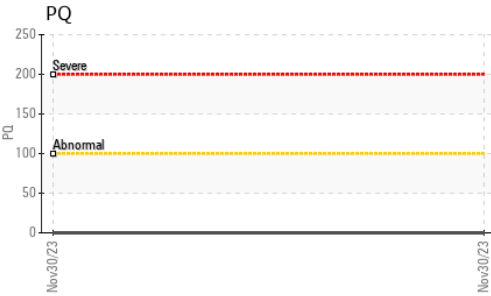
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	---	---
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Free Water	scalar	Visual*		<b>NEG</b>	---	---
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FLUID PROPERTIES	method	limit/base	current	history1	history2
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Visc @ 100°C	cSt	ASTM D7279(m)	12.00	<b>11.4</b>	---	---
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## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 PERFORMANCE EQUIPMENT - VISION TRUCK  
**Sample No.** : WC0869675 **Received** : 05 Dec 2023  
**Lab Number** : 02600854 **Diagnosed** : 06 Dec 2023  
**Unique Number** : 5693939 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: PQ )

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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