



OIL ANALYSIS REPORT

Sample Rating Trend

DEGRADATION

Area
[64525]
 Machine Id
VOLVO VNR 4601
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 10W30 (--- GAL)



DIAGNOSIS

Recommendation

We advise that you check for faulty combustion and a possible overheat condition. 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 abnormal. 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

A small degree of oil oxidation was indicated. 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	WC0869698	---	---
Sample Date	Client Info	20 Dec 2023	---	---
Machine Age	mths Client Info	25	---	---
Oil Age	mths Client Info	9	---	---
Oil Changed	Client Info	Changed	---	---
Sample Status		ABNORMAL	---	---

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2
Iron ppm	ASTM D5185(m) >100	81	---	---
Chromium ppm	ASTM D5185(m) >20	1	---	---
Nickel ppm	ASTM D5185(m) >2	▲ 3	---	---
Titanium ppm	ASTM D5185(m)	0	---	---
Silver ppm	ASTM D5185(m) >2	<1	---	---
Aluminum ppm	ASTM D5185(m) >25	5	---	---
Lead ppm	ASTM D5185(m) >40	2	---	---
Copper ppm	ASTM D5185(m) >330	11	---	---
Tin ppm	ASTM D5185(m) >15	2	---	---
Antimony ppm	ASTM D5185(m)	0	---	---
Vanadium ppm	ASTM D5185(m)	0	---	---
Beryllium ppm	ASTM D5185(m)	0	---	---
Cadmium ppm	ASTM D5185(m)	0	---	---

ADDITIVES

method	limit/base	current	history1	history2
Boron ppm	ASTM D5185(m) 2	2	---	---
Barium ppm	ASTM D5185(m) 0	0	---	---
Molybdenum ppm	ASTM D5185(m) 50	62	---	---
Manganese ppm	ASTM D5185(m) 0	<1	---	---
Magnesium ppm	ASTM D5185(m) 950	939	---	---
Calcium ppm	ASTM D5185(m) 1050	1205	---	---
Phosphorus ppm	ASTM D5185(m) 995	1016	---	---
Zinc ppm	ASTM D5185(m) 1180	1208	---	---
Sulfur ppm	ASTM D5185(m) 2600	2290	---	---
Lithium ppm	ASTM D5185(m)	<1	---	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon ppm	ASTM D5185(m) >25	10	---	---
Sodium ppm	ASTM D5185(m)	3	---	---
Potassium ppm	ASTM D5185(m) >20	7	---	---

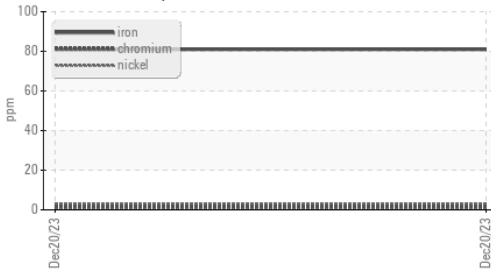
INFRA-RED

method	limit/base	current	history1	history2
Soot %	ASTM D7844* >3	0.8	---	---
Nitration Abs/cm	ASTM D7624* >20	15.4	---	---
Sulfation Abs./1mm	ASTM D7415* >30	28.8	---	---



OIL ANALYSIS REPORT

▲ Ferrous Alloys



FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs./1mm ASTM D7414*	▲ 28.4	---	---

VISUAL

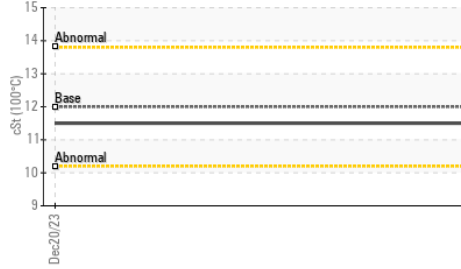
method	limit/base	current	history1	history2
Emulsified Water	scalar Visual*	NEG	---	---
Free Water	scalar Visual*	NEG	---	---

FLUID PROPERTIES

method	limit/base	current	history1	history2
Visc @ 100°C	cSt ASTM D7279(m)	11.5	---	---

GRAPHS

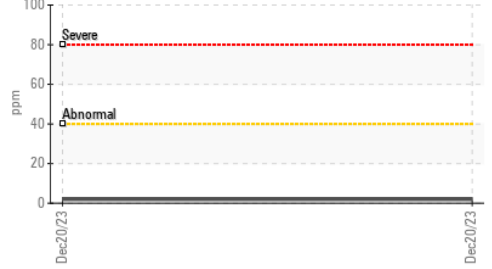
Viscosity @ 100°C



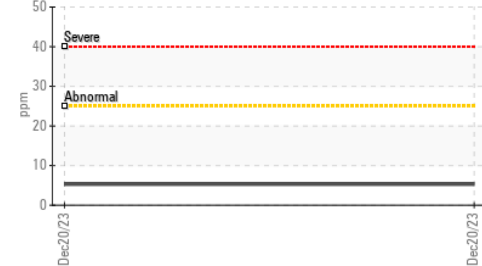
Iron (ppm)



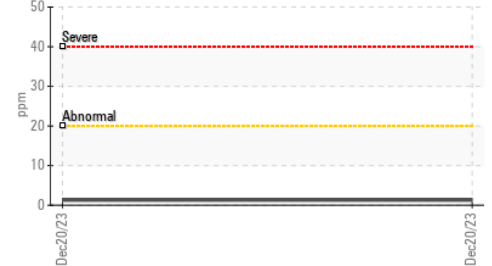
Lead (ppm)



Aluminum (ppm)



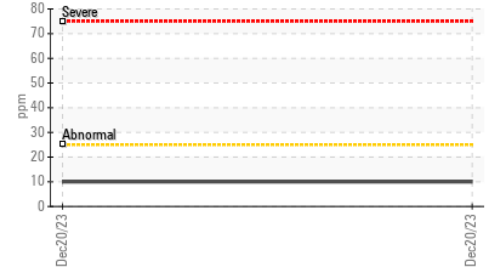
Chromium (ppm)



Copper (ppm)



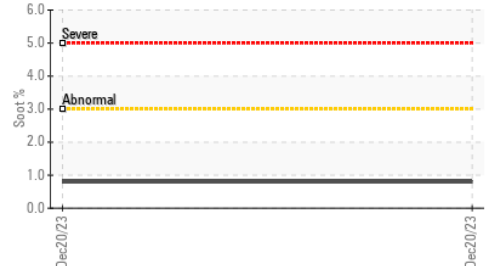
Silicon (ppm)



Viscosity @ 100°C



Soot %



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 PERFORMANCE EQUIPMENT - VISION TRUCK
Sample No. : WC0869698 **Received** : 22 Dec 2023 **415 EVANS AVENUE**
Lab Number : 02604878 **Diagnosed** : 22 Dec 2023 **ETOBICOKE, ON**
Unique Number : 5697963 **Diagnostician** : Kevin Marson **CA M8W 0B3**
Test Package : MOB 1 **Contact: Service**

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