



OIL ANALYSIS REPORT

Sample Rating Trend

WEAR

Area
[64406]
 Machine Id
VOLVO VNL 4459
 Component
Diesel Engine
 Fluid
NOT GIVEN (--- GAL)



DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. The fluid was not specified, however, a fluid match indicates that this fluid is SAE 30 Diesel Engine Oil. Please confirm the oil type and grade, and specify the brand of the oil on your next sample.

Wear

Iron ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated.

Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

Fluid Condition

Viscosity of sample indicates oil is within SAE 30 range, advise investigate. 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		WC0869689	---	---
Sample Date	Client Info		15 Dec 2023	---	---
Machine Age	kms	Client Info	913755	---	---
Oil Age	kms	Client Info	206995	---	---
Oil Changed	Client Info		Changed	---	---
Sample Status			ABNORMAL	---	---

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	---	---

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*		5	---	---
Iron	ppm	ASTM D5185(m) >100	▲ 169	---	---
Chromium	ppm	ASTM D5185(m) >20	2	---	---
Nickel	ppm	ASTM D5185(m) >2	1	---	---
Titanium	ppm	ASTM D5185(m)	0	---	---
Silver	ppm	ASTM D5185(m) >2	<1	---	---
Aluminum	ppm	ASTM D5185(m) >25	10	---	---
Lead	ppm	ASTM D5185(m) >40	3	---	---
Copper	ppm	ASTM D5185(m) >330	15	---	---
Tin	ppm	ASTM D5185(m) >15	1	---	---
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)	5	---	---
Barium	ppm	ASTM D5185(m)	<1	---	---
Molybdenum	ppm	ASTM D5185(m)	62	---	---
Manganese	ppm	ASTM D5185(m)	2	---	---
Magnesium	ppm	ASTM D5185(m)	907	---	---
Calcium	ppm	ASTM D5185(m)	1306	---	---
Phosphorus	ppm	ASTM D5185(m)	997	---	---
Zinc	ppm	ASTM D5185(m)	1225	---	---
Sulfur	ppm	ASTM D5185(m)	2120	---	---
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)	8	---	---
Potassium	ppm	ASTM D5185(m) >20	5	---	---
Fuel	%	ASTM D7593* >6.0	0.9	---	---
Glycol	%	ASTM D7922*	0.0	---	---

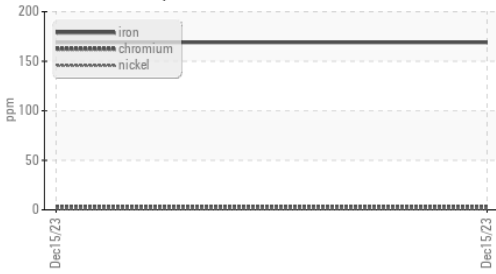
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	1.4	---	---
Nitration	Abs/cm	ASTM D7624* >20	14.2	---	---
Sulfation	Abs/.1mm	ASTM D7415* >30	29.4	---	---

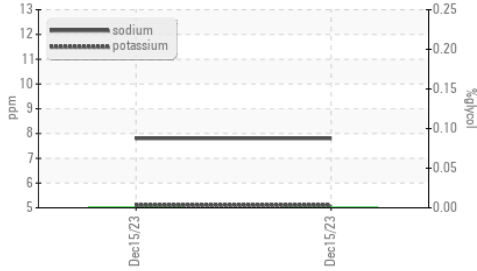


OIL ANALYSIS REPORT

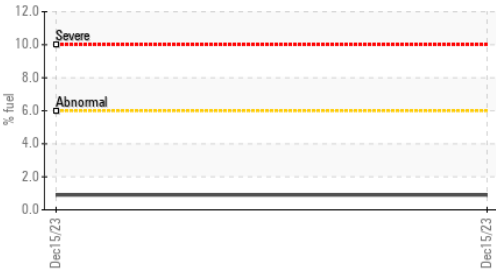
▲ Ferrous Alloys



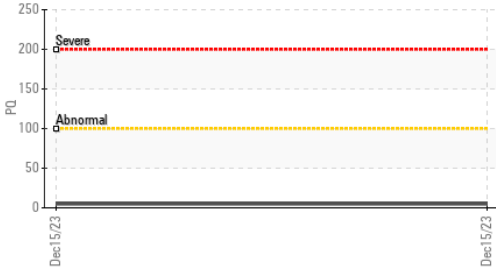
Glycol Contamination



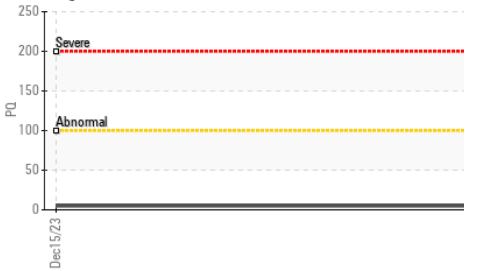
Fuel Dilution



PQ



PQ



FLUID DEGRADATION

Method	Limit/Base	Current	History1	History2
Oxidation	Abs./1mm ASTM D7414*	28.4	---	---

VISUAL

Method	Limit/Base	Current	History1	History2
White Metal	Visual* NONE	NONE	---	---
Yellow Metal	Visual* NONE	NONE	---	---
Precipitate	Visual* NONE	NONE	---	---
Silt	Visual* NONE	NONE	---	---
Debris	Visual* NONE	NONE	---	---
Sand/Dirt	Visual* NONE	VLITE	---	---
Appearance	Visual* NORML	NORML	---	---
Odor	Visual* NORML	NORML	---	---
Emulsified Water	Visual* >0.2	NEG	---	---
Free Water	Visual*	NEG	---	---

FLUID PROPERTIES

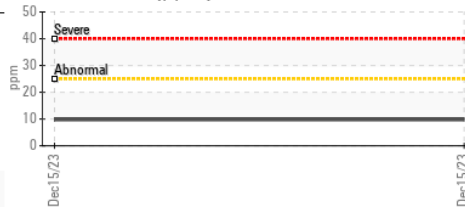
Method	Limit/Base	Current	History1	History2
Visc @ 100°C	cSt ASTM D7279(m)	11.5	---	---

GRAPHS

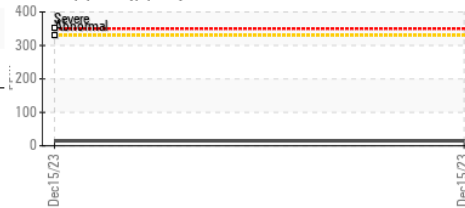
▲ Iron (ppm)



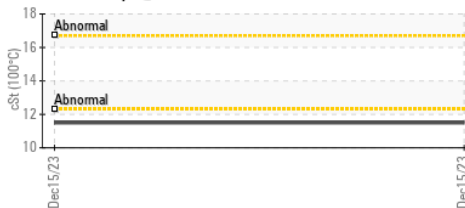
Aluminum (ppm)



Copper (ppm)



Viscosity @ 100°C



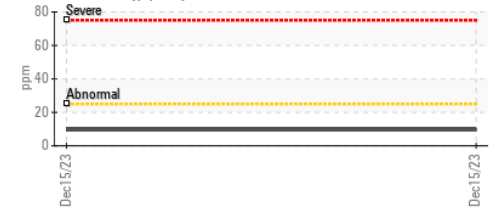
Lead (ppm)



Chromium (ppm)



Silicon (ppm)



Soot %



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 PERFORMANCE EQUIPMENT - VISION TRUCK
Sample No. : WC0869689 **Received** : 20 Dec 2023 415 EVANS AVENUE
Lab Number : 02604309 **Diagnosed** : 21 Dec 2023 ETOBICOKE, ON
Unique Number : 5697394 **Diagnostician** : Kevin Marson CA M8W 0B3
Test Package : MOB 1 (Additional Tests: FuelDilution, Glycol, PercentFuel, PQ, Visual) 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: