



OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id

VOLVO EC380E 315908

Component

Diesel Engine

Fluid

VOLVO VDS-4.5 Premium Motor Oil 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other metal levels are typical for a new component breaking in.

Contamination

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

Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	ML0002774	---	---
Sample Date	Client Info	14 Jun 2024	---	---
Machine Age	hrs	Client Info	526	---
Oil Age	hrs	Client Info	526	---
Oil Changed	Client Info	Changed	---	---
Sample Status		ABNORMAL	---	---

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method	>0.1	NEG	---
Glycol	WC Method		NEG	---

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>100	10	---
Chromium	ppm	ASTM D5185m	>10	<1	---
Nickel	ppm	ASTM D5185m	>10	<1	---
Titanium	ppm	ASTM D5185m		<1	---
Silver	ppm	ASTM D5185m	>2	<1	---
Aluminum	ppm	ASTM D5185m	>10	3	---
Lead	ppm	ASTM D5185m	>20	6	---
Copper	ppm	ASTM D5185m	>15	470	---
Tin	ppm	ASTM D5185m	>10	2	---
Vanadium	ppm	ASTM D5185m		<1	---
Cadmium	ppm	ASTM D5185m		<1	---

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		49	---
Barium	ppm	ASTM D5185m		0	---
Molybdenum	ppm	ASTM D5185m		82	---
Manganese	ppm	ASTM D5185m		3	---
Magnesium	ppm	ASTM D5185m		87	---
Calcium	ppm	ASTM D5185m		2464	---
Phosphorus	ppm	ASTM D5185m		1065	---
Zinc	ppm	ASTM D5185m		1306	---
Sulfur	ppm	ASTM D5185m		4780	---

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>20	24	---
Sodium	ppm	ASTM D5185m		2	---
Potassium	ppm	ASTM D5185m	>20	5	---
Fuel	%	ASTM D3524	>6.0	0.4	---

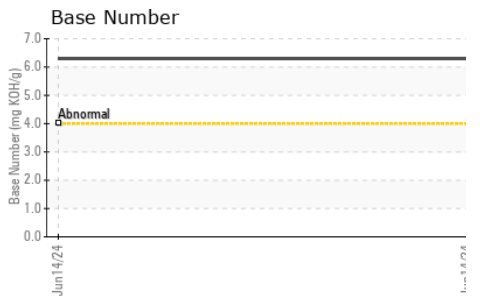
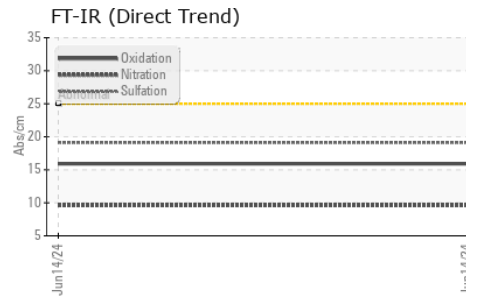
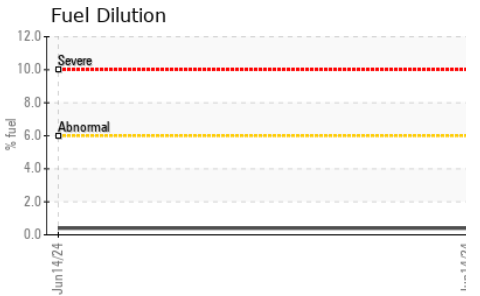
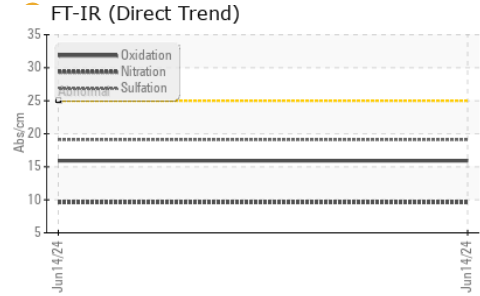
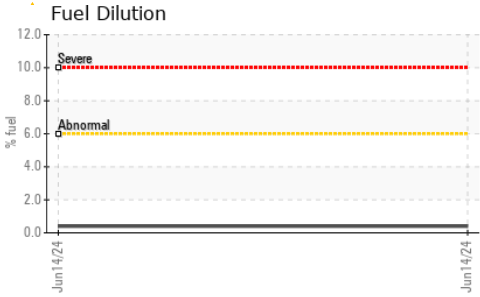
INFRA-RED

method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	9.6	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.1	---

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.9	---
Base Number (BN)	mg KOH/g	ASTM D2896		6.3	---

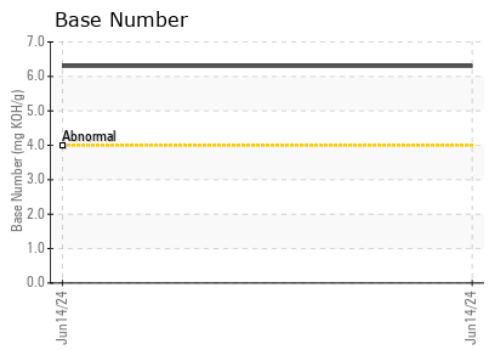
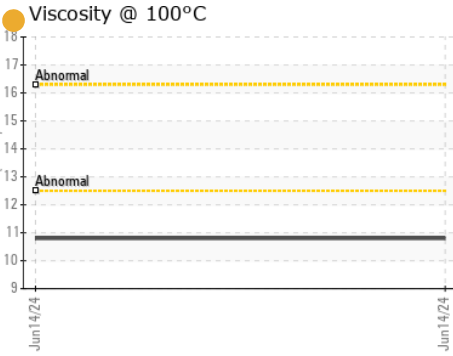
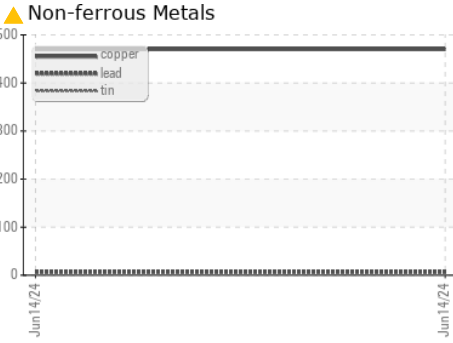
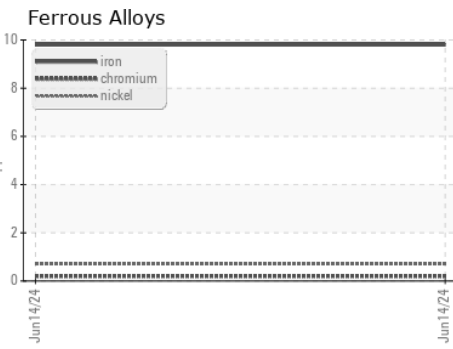
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Precipitate	scalar	*Visual	NONE	NONE	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.1	NEG	---	---
Free Water	scalar	*Visual		NEG	---	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	● 10.8	---	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ML0002774 **Received** : 24 Jun 2024
Lab Number : 06219058 **Tested** : 27 Jun 2024
Unique Number : 11097255 **Diagnosed** : 27 Jun 2024 - Don Baldrige
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

McCLUNG-LOGAN EQUIPMENT CO - RICHMOND
 1345 MOUNTAIN ROAD
 GLEN ALLEN, VA
 US 23060
 Contact: KYLE RATLIFFE
 KRATLIFFE@McCLUNG-LOGAN.COM

To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (804)266-1611