



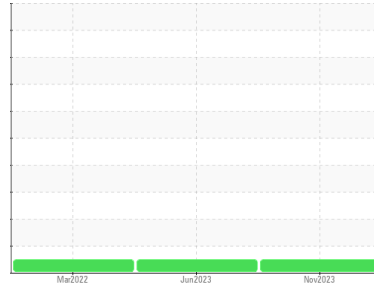
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
ONE WORLD LOGISTICS
 Machine Id
VOLVO OWL207125
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 40. Please confirm.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		NL0001755	NL0001596	NL0000884
Sample Date	Client Info		27 Nov 2023	12 Jun 2023	23 Mar 2022
Machine Age	mls	Client Info	449507	449507	255463
Oil Age	mls	Client Info	399552	71657	27653
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	49	66	43
Chromium	ppm	ASTM D5185m >20	<1	1	1
Nickel	ppm	ASTM D5185m >2	<1	1	4
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m >2	0	0	<1
Aluminum	ppm	ASTM D5185m >25	7	9	7
Lead	ppm	ASTM D5185m >40	<1	2	2
Copper	ppm	ASTM D5185m >330	10	13	25
Tin	ppm	ASTM D5185m >15	0	1	1
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	0	0	<1
Barium	ppm	ASTM D5185m 10	2	0	0
Molybdenum	ppm	ASTM D5185m 100	72	73	62
Manganese	ppm	ASTM D5185m	0	1	1
Magnesium	ppm	ASTM D5185m 450	1081	1092	998
Calcium	ppm	ASTM D5185m 3000	1189	1211	1163
Phosphorus	ppm	ASTM D5185m 1150	1060	1160	970
Zinc	ppm	ASTM D5185m 1350	1368	1442	1119
Sulfur	ppm	ASTM D5185m 4250	2943	2741	2009

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	8	7	7
Sodium	ppm	ASTM D5185m >216	2	<1	3
Potassium	ppm	ASTM D5185m >20	5	5	9

INFRA-RED

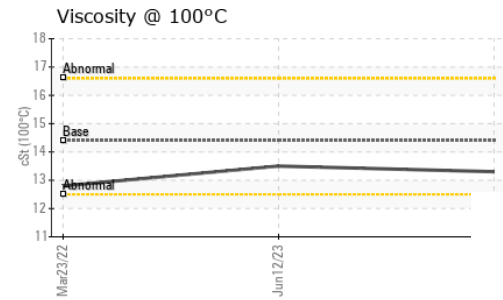
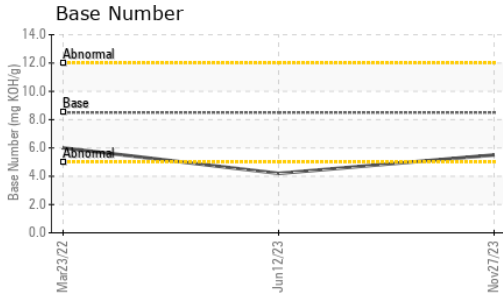
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	1	1.2	1
Nitration	Abs/cm	*ASTM D7624 >20	12.0	13.8	14.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	24.2	27.5	26.1

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	20.5	26.0	22.9
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	5.5	4.2	6.0



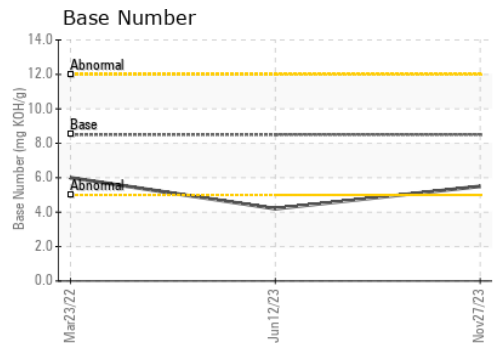
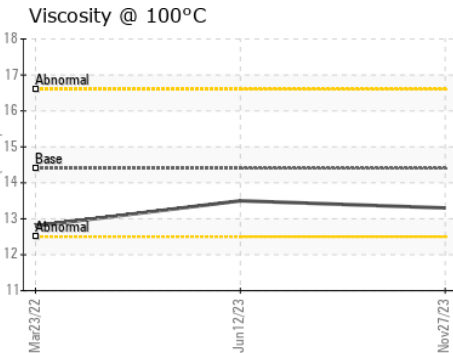
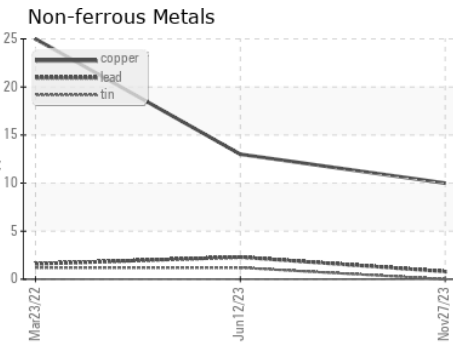
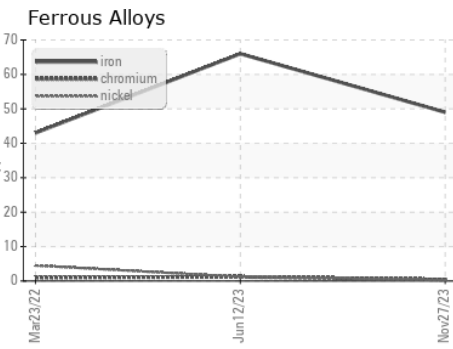
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	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 D445	14.4	13.3	13.5	12.8

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : NL0001755 **Received** : 05 Dec 2023
Lab Number : **06025663** **Diagnosed** : 06 Dec 2023
Unique Number : 10770163 **Diagnostician** : Wes Davis
Test Package : FLEET

KIRK NATIONALEASE - SHOP 49
 601 England Rd.
 Lincoln, AL
 US 35096
 Contact: Skip Womack
 shop49@knl.cc
 T: (205)548-3004
 F: (205)548-3006

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)