



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
ONE WORLD LOGISTICS
Machine Id
VOLVO OWL207121
Component
Diesel Engine
Fluid
NOT GIVEN (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		NL0002294	NL0001934	NL0001600
Sample Date		Client Info		16 May 2024	27 Dec 2023	12 Jul 2023
Machine Age	mls	Client Info		562670	504915	428756
Oil Age	mls	Client Info		57755	0	67199
Filter Age	mls	Client Info		0	0	67199
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

Valve wear is indicated. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	75	▲ 105	▲ 110
Chromium	ppm	ASTM D5185m	>20	2	3	3
Nickel	ppm	ASTM D5185m	>2	▲ 12	▲ 8	▲ 14
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>2	1	<1	0
Aluminum	ppm	ASTM D5185m	>25	9	7	12
Lead	ppm	ASTM D5185m	>40	3	3	2
Copper	ppm	ASTM D5185m	>330	17	16	17
Tin	ppm	ASTM D5185m	>15	2	2	2
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

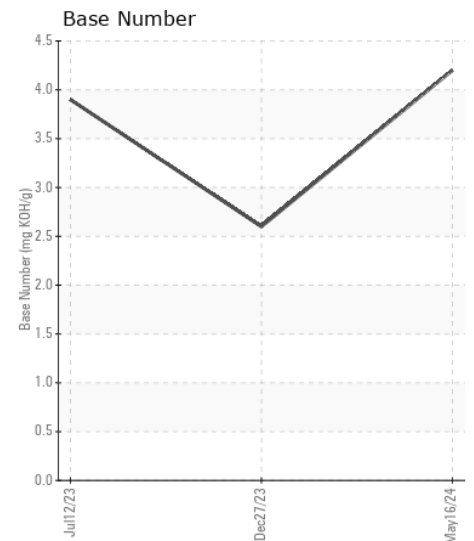
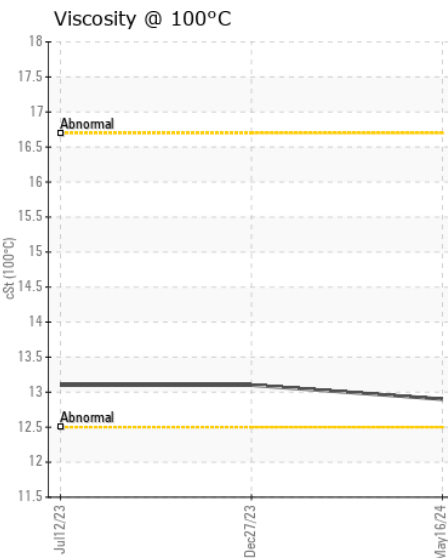
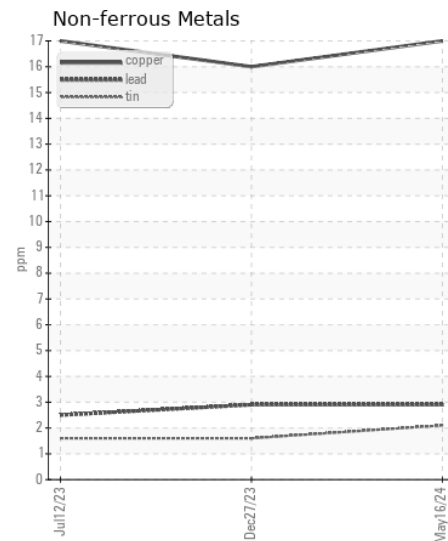
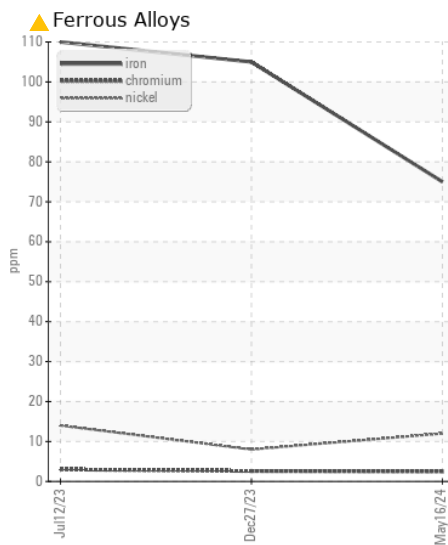
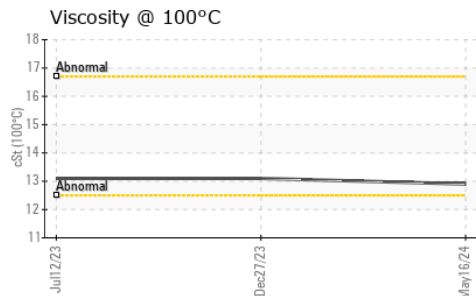
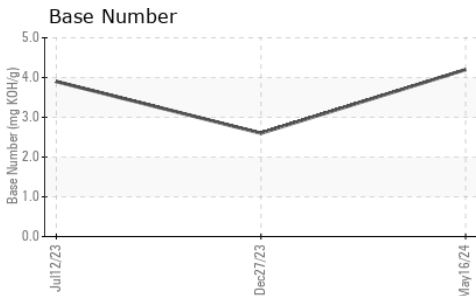
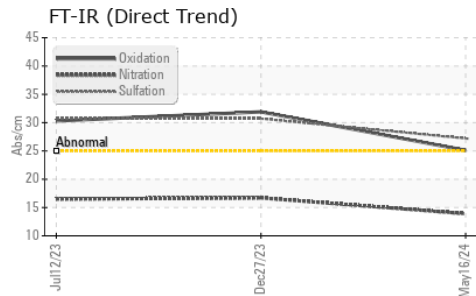
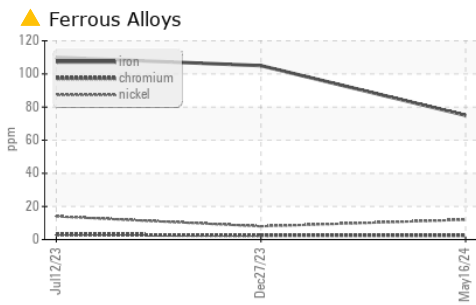
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	16	11	13
Potassium	ppm	ASTM D5185m	>20	6	7	6
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
Soot %	%	*ASTM D7844	>3	1.3	1.6	1.5
Nitration	Abs/cm	*ASTM D7624	>20	13.9	16.7	16.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.2	30.7	30.7
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		2	0	6
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	8	0
Molybdenum	ppm	ASTM D5185m		69	68	63
Manganese	ppm	ASTM D5185m		1	2	2
Magnesium	ppm	ASTM D5185m		1045	1041	996
Calcium	ppm	ASTM D5185m		1202	1198	1406
Phosphorus	ppm	ASTM D5185m		967	1014	1101
Zinc	ppm	ASTM D5185m		1348	1369	1418
Sulfur	ppm	ASTM D5185m		2471	2513	2915
Oxidation	Abs/.1mm	*ASTM D7414	>25	25.1	31.9	30.3
Base Number (BN)	mg KOH/g	ASTM D2896		4.2	▲ 2.6	3.9
Visc @ 100°C	cSt	ASTM D445		12.9	13.1	13.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : NL0002294
Lab Number : 06190340
Unique Number : 11047092
Test Package : FLEET

Received : 24 May 2024
Tested : 29 May 2024
Diagnosed : 29 May 2024 - Don Baldrige

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)