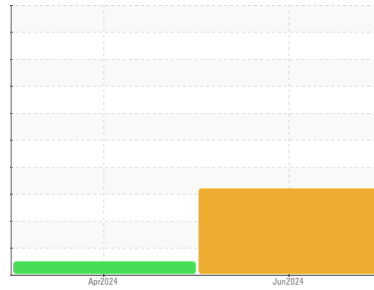




OIL ANALYSIS REPORT

Sample Rating Trend



WATER



Machine Id
8339116 (S/N 1382)
 Component
Compressor
 Fluid
KAESER SIGMA (OEM) S-460 (--- GAL)

DIAGNOSIS

Recommendation

The filter change at the time of sampling has been noted. We advise that you stop the unit and follow the water drain-off procedure for this component. We recommend an early resample in 500 hours to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates present in the oil. There is a light concentration of water present in the oil.

Fluid Condition

The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			KC129131	KC130147	---
Sample Date	Client Info			05 Jun 2024	11 Apr 2024	---
Machine Age	hrs	Client Info		1712	1360	---
Oil Age	hrs	Client Info		100	500	---
Oil Changed	Client Info			Not Chngd	Changed	---
Sample Status				ABNORMAL	NORMAL	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	0	0	---
Chromium	ppm	ASTM D5185m	>10	<1	0	---
Nickel	ppm	ASTM D5185m	>3	0	0	---
Titanium	ppm	ASTM D5185m	>3	<1	0	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>10	2	<1	---
Lead	ppm	ASTM D5185m	>10	<1	0	---
Copper	ppm	ASTM D5185m	>50	1	1	---
Tin	ppm	ASTM D5185m	>10	<1	0	---
Vanadium	ppm	ASTM D5185m		0	0	---
Cadmium	ppm	ASTM D5185m		0	0	---

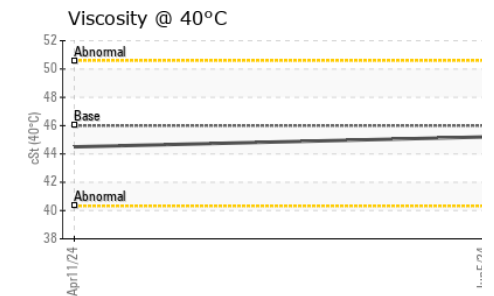
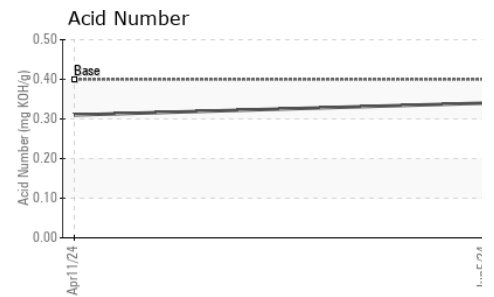
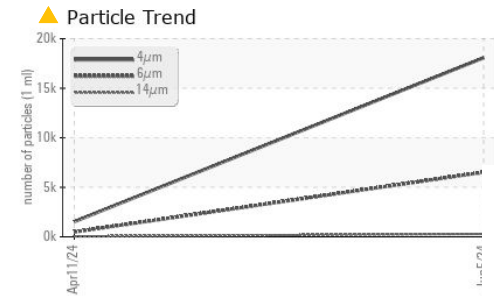
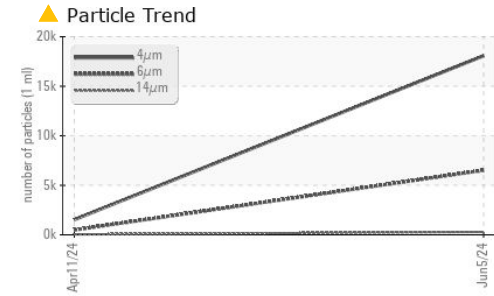
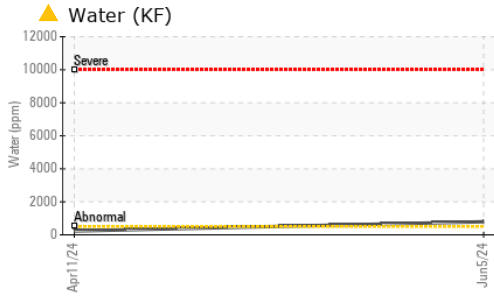
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	---
Barium	ppm	ASTM D5185m	90	40	20	---
Molybdenum	ppm	ASTM D5185m		0	0	---
Manganese	ppm	ASTM D5185m		0	0	---
Magnesium	ppm	ASTM D5185m	90	68	69	---
Calcium	ppm	ASTM D5185m	2	0	2	---
Phosphorus	ppm	ASTM D5185m		0	0	---
Zinc	ppm	ASTM D5185m		0	0	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<1	0	---
Sodium	ppm	ASTM D5185m		13	14	---
Potassium	ppm	ASTM D5185m	>20	10	14	---
Water	%	ASTM D6304	>0.05	▲ 0.079	0.023	---
ppm Water	ppm	ASTM D6304	>500	▲ 792	232	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		18079	1531	---
Particles >6µm		ASTM D7647	>1300	▲ 6517	485	---
Particles >14µm		ASTM D7647	>80	▲ 289	38	---
Particles >21µm		ASTM D7647	>20	● 33	10	---
Particles >38µm		ASTM D7647	>4	2	1	---
Particles >71µm		ASTM D7647	>3	0	0	---
Oil Cleanliness		ISO 4406 (c)	>--/17/13	▲ 21/20/15	18/16/12	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	0.34	0.31	---

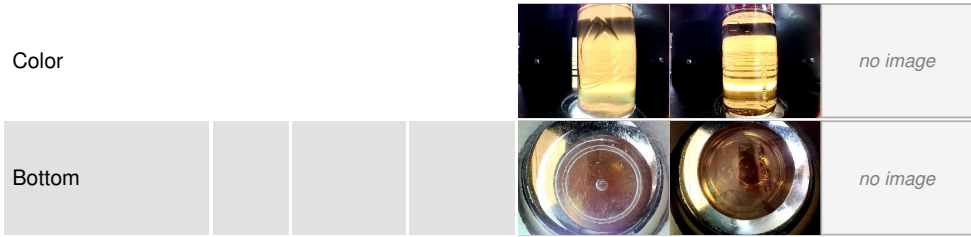
OIL ANALYSIS REPORT



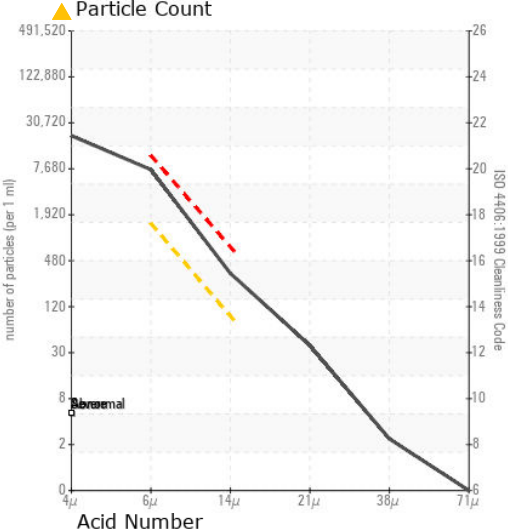
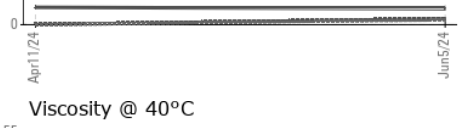
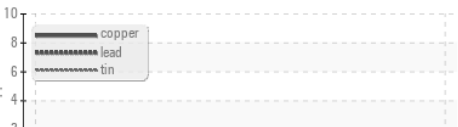
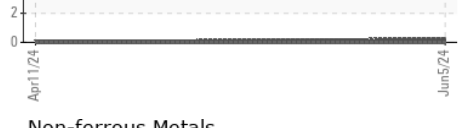
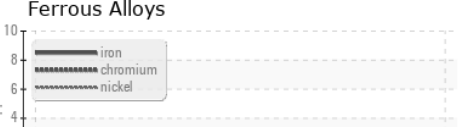
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.05	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 46	45.2	44.5	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KC129131
Lab Number : 06207838
Unique Number : 11075299
Test Package : IND 2

Received : 12 Jun 2024
Tested : 13 Jun 2024
Diagnosed : 14 Jun 2024 - Angela Borella

VOLVO BATTERY SOLUTIONS
 1605 POPLAR DR EXT
 GREER, SC
 US 29651
 Contact: Service Manager

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)