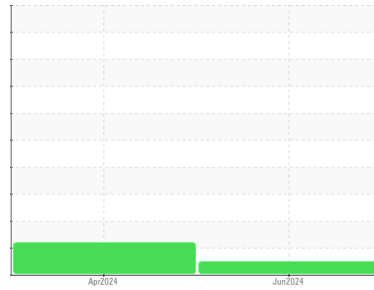




# OIL ANALYSIS REPORT

## Sample Rating Trend



Machine Id  
**8296492 (S/N 1376)**  
 Component  
**Compressor**  
 Fluid  
**KAESER SIGMA (OEM) S-460 (--- GAL)**

### DIAGNOSIS

**Recommendation**  
 Resample at the next service interval to monitor.

**Wear**  
 All component wear rates are normal.

**Contamination**  
 The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

**Fluid Condition**  
 The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>KC131439</b>	KC130125	---
Sample Date	Client Info			<b>05 Jun 2024</b>	11 Apr 2024	---
Machine Age	hrs Client Info			<b>7871</b>	7870	---
Oil Age	hrs Client Info			<b>100</b>	6000	---
Oil Changed	Client Info			<b>Not Changed</b>	Changed	---
Sample Status				<b>NORMAL</b>	ATTENTION	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	<b>0</b>	0	---
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	---
Nickel	ppm	ASTM D5185m	>3	<b>0</b>	0	---
Titanium	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	---
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>10	<b>2</b>	0	---
Lead	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	---
Copper	ppm	ASTM D5185m	>50	<b>2</b>	15	---
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	---

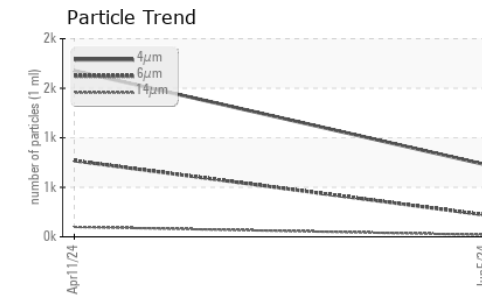
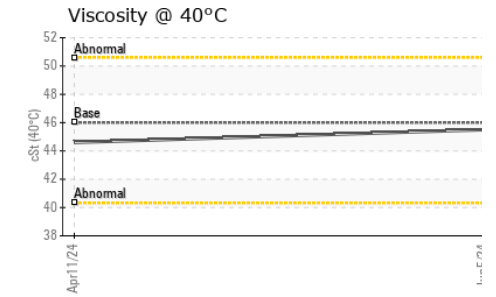
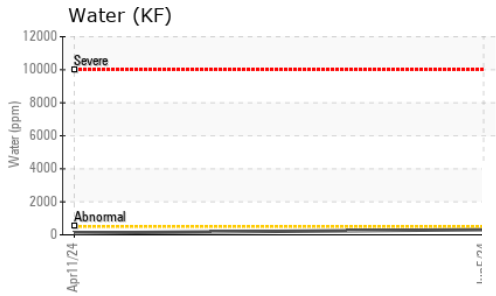
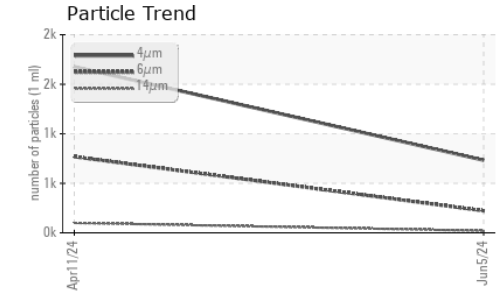
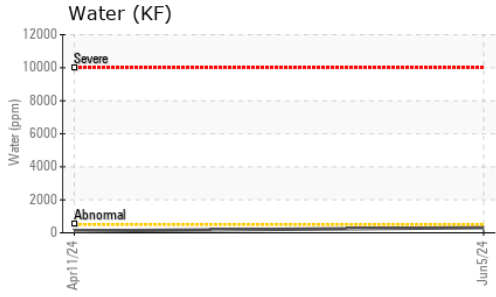
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>0</b>	0	---
Barium	ppm	ASTM D5185m	90	<b>70</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	---
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	---
Magnesium	ppm	ASTM D5185m	90	<b>74</b>	19	---
Calcium	ppm	ASTM D5185m	2	<b>0</b>	<1	---
Phosphorus	ppm	ASTM D5185m		<b>0</b>	<1	---
Zinc	ppm	ASTM D5185m		<b>0</b>	0	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>&lt;1</b>	<1	---
Sodium	ppm	ASTM D5185m		<b>3</b>	17	---
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	8	---
Water	%	ASTM D6304	>0.05	<b>0.031</b>	0.010	---
ppm Water	ppm	ASTM D6304	>500	<b>315</b>	110	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		<b>733</b>	1677	---
Particles >6µm		ASTM D7647	>1300	<b>222</b>	768	---
Particles >14µm		ASTM D7647	>80	<b>20</b>	100	---
Particles >21µm		ASTM D7647	>20	<b>5</b>	31	---
Particles >38µm		ASTM D7647	>4	<b>0</b>	2	---
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	---
Oil Cleanliness		ISO 4406 (c)	>--/17/13	<b>17/15/11</b>	18/17/14	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	<b>0.37</b>	0.25	---

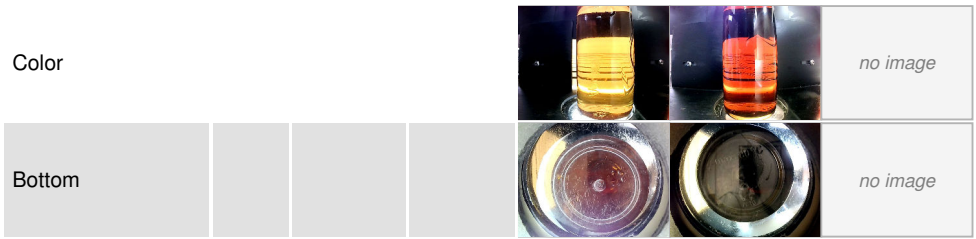
# OIL ANALYSIS REPORT



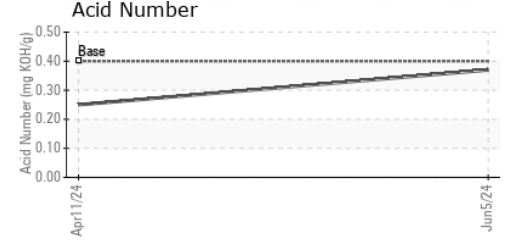
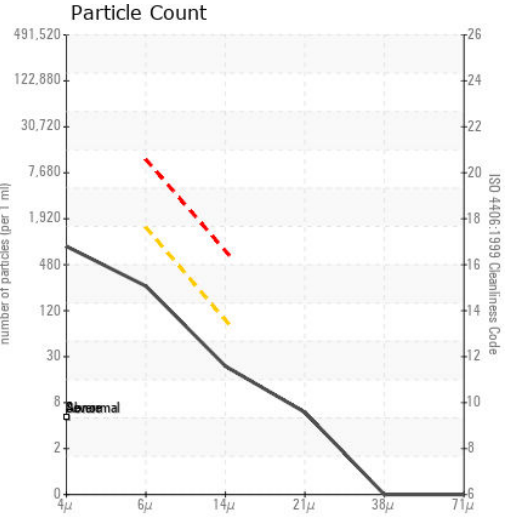
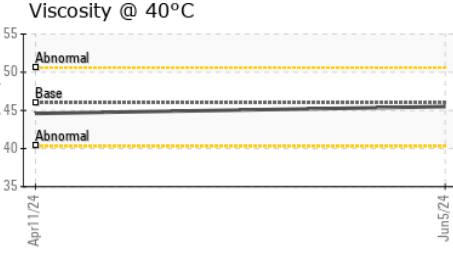
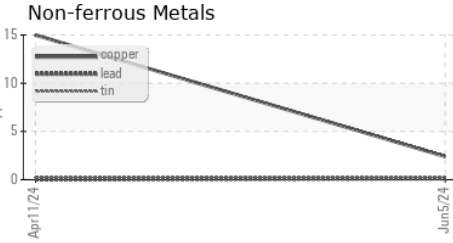
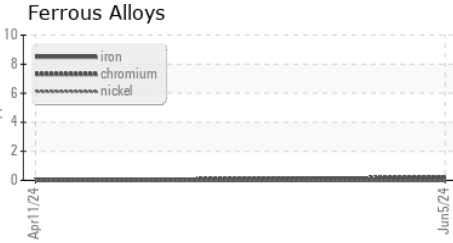
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*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	45.5	44.6

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KC131439  
**Lab Number** : 06207816  
**Unique Number** : 11075277  
**Test Package** : IND 2  
**Received** : 12 Jun 2024  
**Tested** : 13 Jun 2024  
**Diagnosed** : 14 Jun 2024 - Don Baldrige

**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)