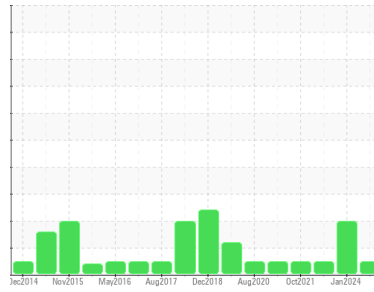




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**KAESER AS 31 1035528 (S/N 1018)**  
 Component  
**Compressor**  
 Fluid  
**KAESER SIGMA (OEM) S-460 (--- QTS)**

## 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>KCPA019440</b>	KCPA008894	KCP53486
Sample Date	Client Info			<b>18 Jun 2024</b>	11 Jan 2024	20 Apr 2023
Machine Age	hrs	Client Info		<b>157082</b>	153415	146900
Oil Age	hrs	Client Info		<b>6918</b>	0	7203
Oil Changed	Client Info			<b>Changed</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	ABNORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	<b>0</b>	<1	<1
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>0</b>	1	0
Lead	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>50	<b>5</b>	9	12
Tin	ppm	ASTM D5185m	>10	<b>0</b>	<1	0
Antimony	ppm	ASTM D5185m		<b>---</b>	---	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

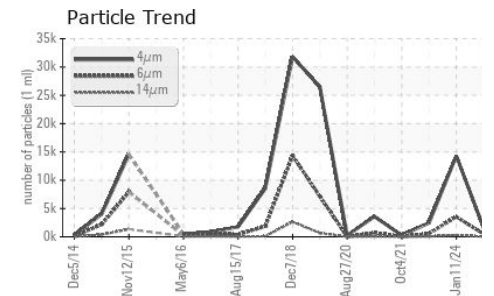
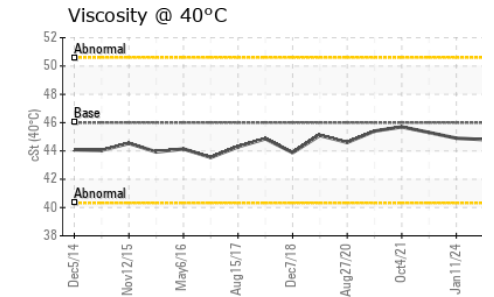
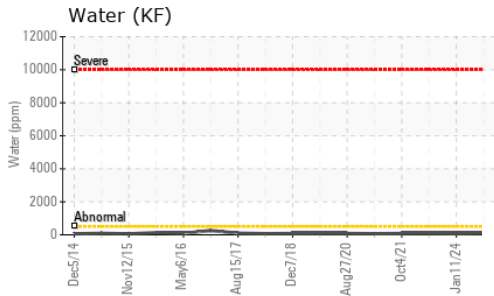
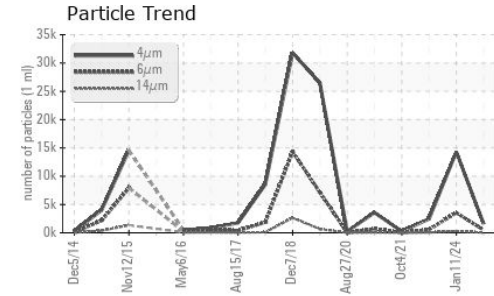
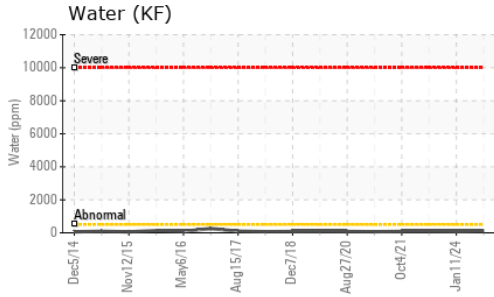
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>0</b>	0	0
Barium	ppm	ASTM D5185m	90	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m	90	<b>&lt;1</b>	11	0
Calcium	ppm	ASTM D5185m	2	<b>0</b>	0	0
Phosphorus	ppm	ASTM D5185m		<b>0</b>	10	0
Zinc	ppm	ASTM D5185m		<b>16</b>	9	9
Sulfur	ppm	ASTM D5185m		<b>19803</b>	17413	20200

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>0</b>	<1	0
Sodium	ppm	ASTM D5185m		<b>2</b>	6	<1
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	0
Water	%	ASTM D6304	>0.05	<b>0.010</b>	0.007	0.009
ppm Water	ppm	ASTM D6304	>500	<b>103</b>	71	94.0

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		<b>1583</b>	14285	2462
Particles >6µm		ASTM D7647	>1300	<b>497</b>	▲ 3539	572
Particles >14µm		ASTM D7647	>80	<b>34</b>	▲ 275	47
Particles >21µm		ASTM D7647	>20	<b>5</b>	▲ 92	17
Particles >38µm		ASTM D7647	>4	<b>0</b>	▲ 6	1
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>--/17/13	<b>18/16/12</b>	▲ 21/19/15	18/16/13

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	<b>0.40</b>	0.37	0.47

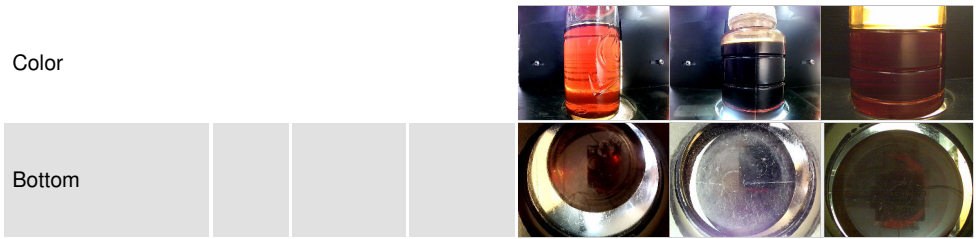
# OIL ANALYSIS REPORT



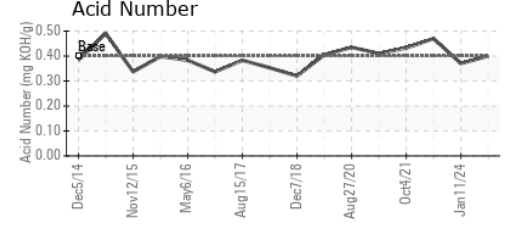
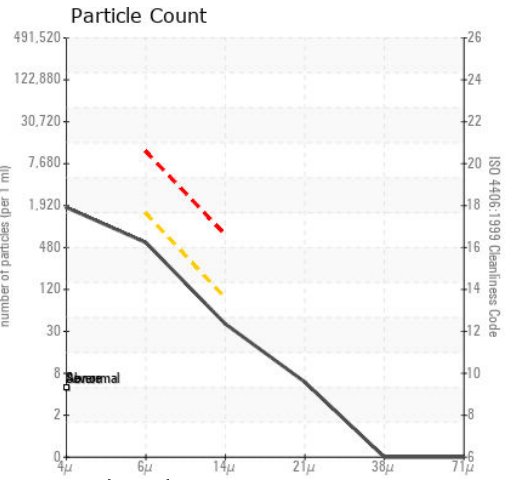
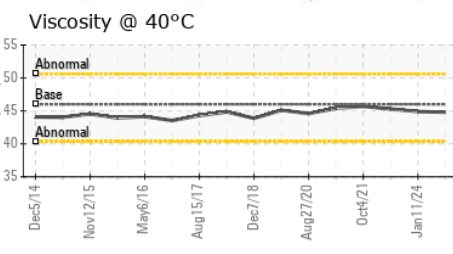
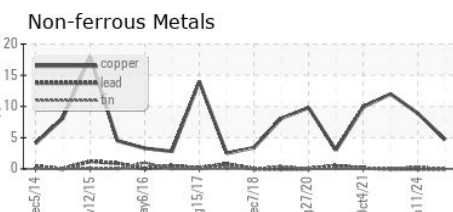
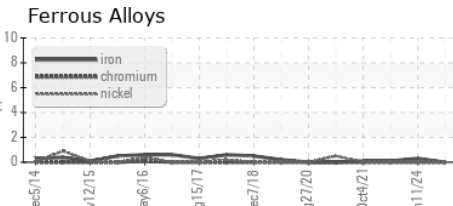
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	44.8	44.9

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KCPA019440 **Received** : 26 Jun 2024  
**Lab Number** : 06221221 **Tested** : 27 Jun 2024  
**Unique Number** : 11099418 **Diagnosed** : 27 Jun 2024 - Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )

**OLD DOMINION FREIGHTLINERS**  
 3608 ROOY MESSER HWY  
 WHITE PINO, TN  
 US 37890  
 Contact: KEVIN SCHULL  
 kevin.schull@odfl.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)