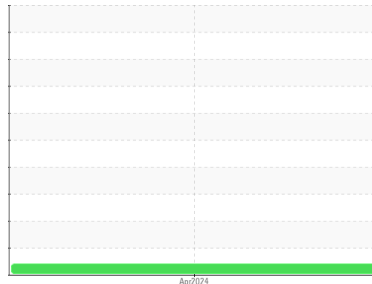# OIL ANALYSIS REPORT

Sample Rating Trend

VISCOSITY

Area
KANSAS/44/EG - LOADER
Machine Id
46.107L [KANSAS^44^EG - LOADER]
Component
Diesel Engine
Fluid
CAT DIESEL ENGINE OIL 15W40 (--- GAL)

DIAGNOSIS

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

Wear
All component wear rates are normal.

Contamination
Fuel content negligible. There is no indication of any contamination in the oil.

⚠ **Fluid Condition**
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION	method	limit/base	current	history1	history2
Sample Number		Client Info	WC0789831	---	---
Sample Date		Client Info	16 Apr 2024	---	---
Machine Age	hrs	Client Info	15	---	---
Oil Age	hrs	Client Info	15	---	---
Oil Changed		Client Info	Not Changd	---	---
Sample Status			ABNORMAL	---	---

CONTAMINATION	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	---	---
Glycol	WC Method		NEG	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	10	---	---
Chromium	ppm	ASTM D5185m	>20	<1	---	---
Nickel	ppm	ASTM D5185m	>2	0	---	---
Titanium	ppm	ASTM D5185m	>2	0	---	---
Silver	ppm	ASTM D5185m	>2	0	---	---
Aluminum	ppm	ASTM D5185m	>25	3	---	---
Lead	ppm	ASTM D5185m	>40	0	---	---
Copper	ppm	ASTM D5185m	>330	24	---	---
Tin	ppm	ASTM D5185m	>15	<1	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
Cadmium	ppm	ASTM D5185m		0	---	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		70	---	---
Barium	ppm	ASTM D5185m		12	---	---
Molybdenum	ppm	ASTM D5185m		34	---	---
Manganese	ppm	ASTM D5185m		4	---	---
Magnesium	ppm	ASTM D5185m		522	---	---
Calcium	ppm	ASTM D5185m		1593	---	---
Phosphorus	ppm	ASTM D5185m		967	---	---
Zinc	ppm	ASTM D5185m	1460	1113	---	---
Sulfur	ppm	ASTM D5185m		3514	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	11	---	---
Sodium	ppm	ASTM D5185m		4	---	---
Potassium	ppm	ASTM D5185m	>20	3	---	---
Fuel	%	ASTM D3524	>5	0.2	---	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.1	---	---
Nitration	Abs/cm	*ASTM D7624	>20	4.6	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.0	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.2	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	11.3	10.3	---	---

Fuel Dilution

FT-IR (Direct Trend)

FT-IR (Direct Trend)

Base Number
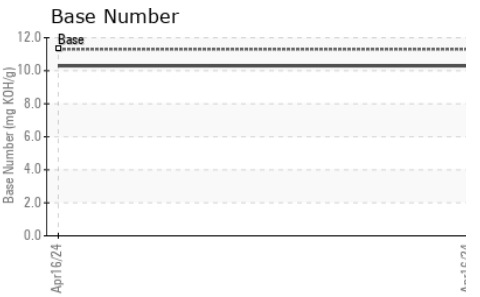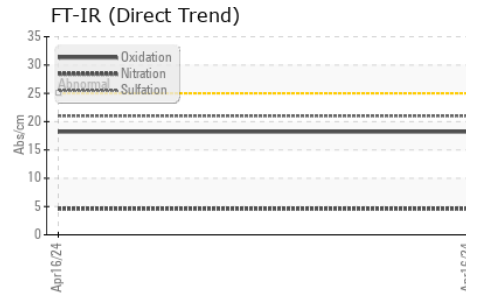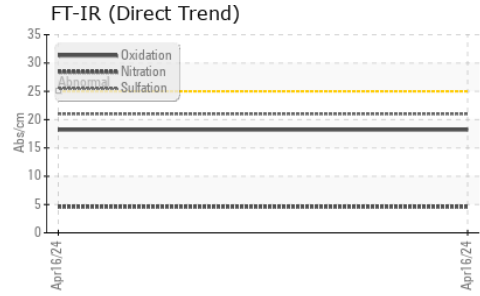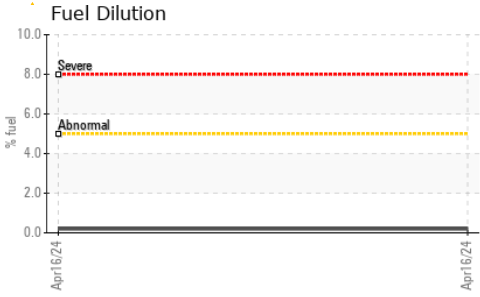
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	---	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	---	---
Precipitate	scalar	*Visual	NONE	**NONE**	---	---
Silt	scalar	*Visual	NONE	**NONE**	---	---
Debris	scalar	*Visual	NONE	**NONE**	---	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	---	---
Appearance	scalar	*Visual	NORML	**NORML**	---	---
Odor	scalar	*Visual	NORML	**NORML**	---	---
Emulsified Water	scalar	*Visual	>0.2	**NEG**	---	---
Free Water	scalar	*Visual		**NEG**	---	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.5	▲ **11.3**	---	---

GRAPHS
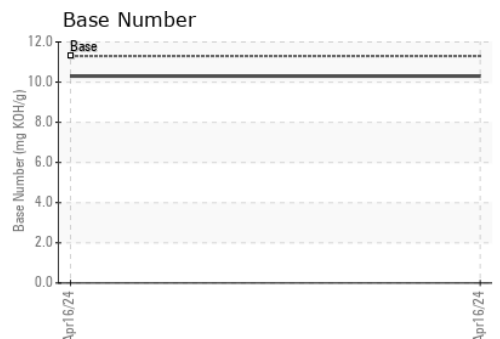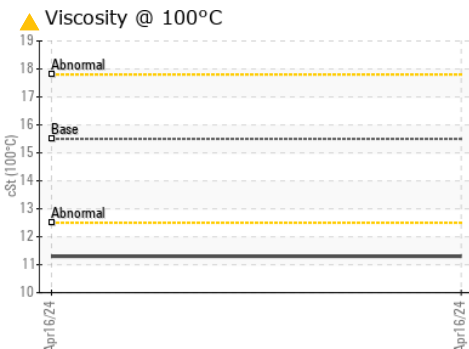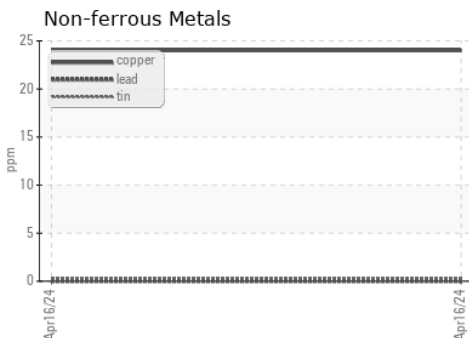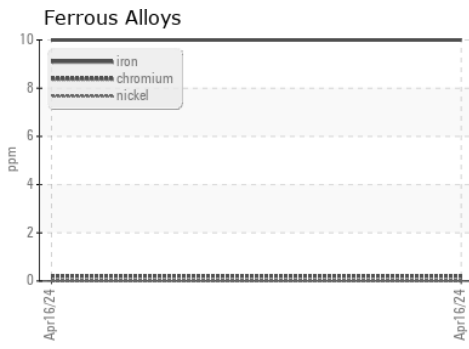
Ferrous Alloys

Non-ferrous Metals

▲ Viscosity @ 100°C

Base Number

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3219 WEST MAY ST
WICHITA, KS
US 67213
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randy.roberts@sherwood.net
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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)

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TESTING LABORATORY
Certificate L2367