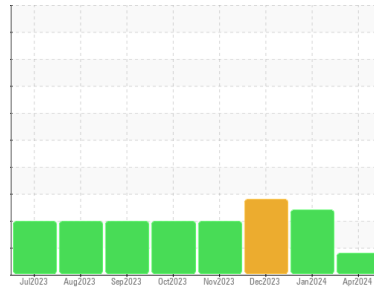




# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Area  
**ARIZONA**

Machine Id  
**2323**

Component  
**Diesel Engine**

Fluid  
**DISEL ENGINE OIL SAE 10W30 (--- QTS)**

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

Exhaust valve wear is indicated.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

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

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0857185</b>	WC0892135	WC0881845
Sample Date	Client Info		<b>01 Apr 2024</b>	02 Jan 2024	05 Dec 2023
Machine Age	hrs	Client Info	<b>1409</b>	1019	870
Oil Age	hrs	Client Info	<b>0</b>	149	870
Oil Changed	Client Info		<b>Not Changed</b>	Changed	Not Changed
Sample Status			<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>17</b>	9	25
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >4	<b>▲ 6</b>	0	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m >3	<b>1</b>	<1	1
Aluminum	ppm	ASTM D5185m >20	<b>4</b>	2	5
Lead	ppm	ASTM D5185m >40	<b>0</b>	2	0
Copper	ppm	ASTM D5185m >330	<b>230</b>	▲ 118	▲ 360
Tin	ppm	ASTM D5185m >15	<b>2</b>	1	3
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	<b>80</b>	99	138
Barium	ppm	ASTM D5185m 10	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m 100	<b>37</b>	29	97
Manganese	ppm	ASTM D5185m	<b>1</b>	<1	2
Magnesium	ppm	ASTM D5185m 450	<b>628</b>	640	498
Calcium	ppm	ASTM D5185m 3000	<b>1434</b>	1351	1557
Phosphorus	ppm	ASTM D5185m 1150	<b>775</b>	722	755
Zinc	ppm	ASTM D5185m 1350	<b>968</b>	799	914
Sulfur	ppm	ASTM D5185m 4250	<b>3016</b>	2850	2522

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>20</b>	▲ 27	▲ 65
Sodium	ppm	ASTM D5185m	<b>3</b>	2	<1
Potassium	ppm	ASTM D5185m >20	<b>11</b>	4	6

## INFRA-RED

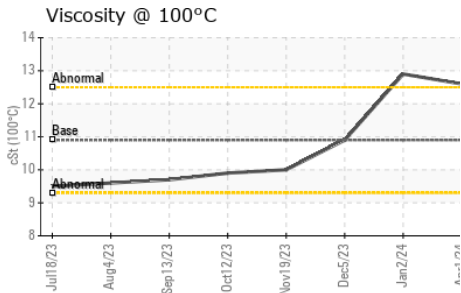
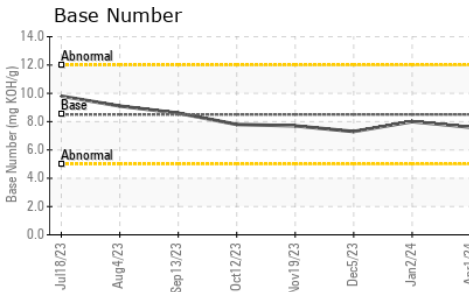
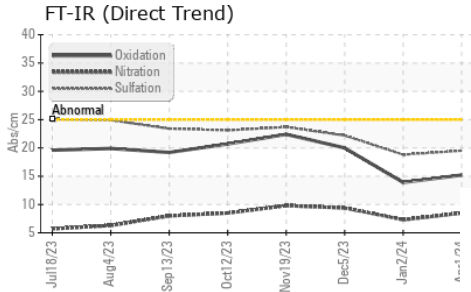
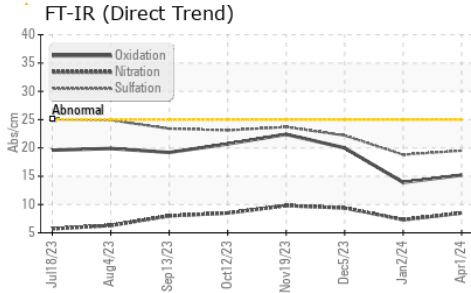
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.2</b>	0.1	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.5</b>	7.3	9.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.5</b>	18.8	22.2

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.2</b>	13.9	20.0
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	<b>7.6</b>	8.0	7.3



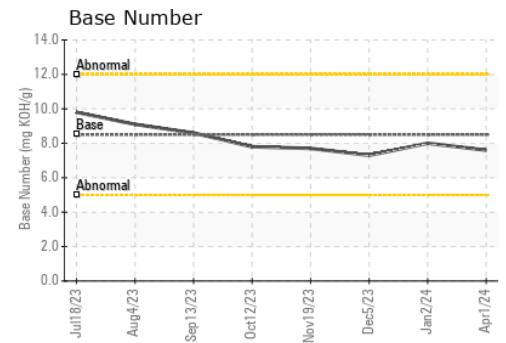
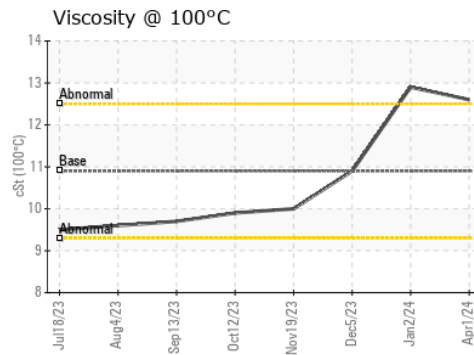
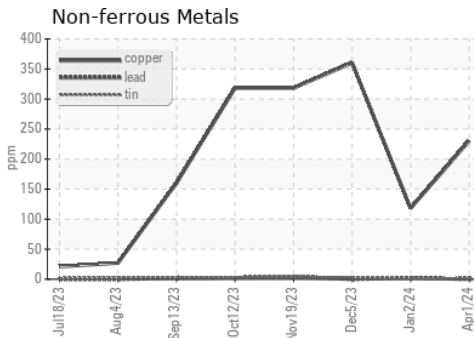
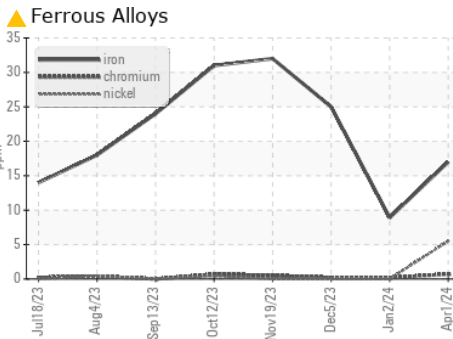
# OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	10.9	12.6	12.9

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0857185

Lab Number : 06156622

Unique Number : 10992045

Test Package : FLEET

Received : 22 Apr 2024

Tested : 23 Apr 2024

Diagnosed : 24 Apr 2024 - Sean Felton

LIBERTY DISPOSAL

6401 S EASTERN AVE

OKLAHOMA CITY, OK

US 73149

Contact: CARRIE MARSHALL

c.marshall@ldi89.com

T:

F:

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)