



# PROBLEM SUMMARY

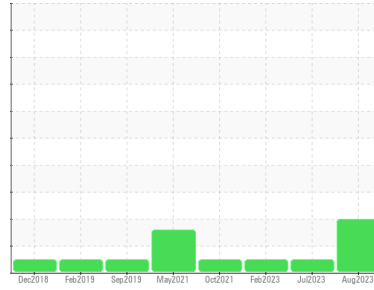
Sample Rating Trend

WEAR



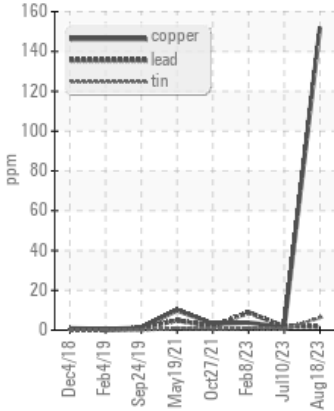
Machine Id  
**FSP134332 (S/N FT9432)**

Component  
**Diesel Engine**  
Fluid  
**EXXON 15W40 (32 QTS)**

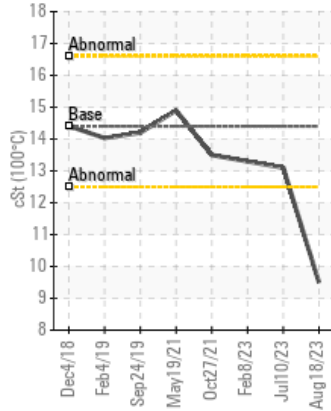


## COMPONENT CONDITION SUMMARY

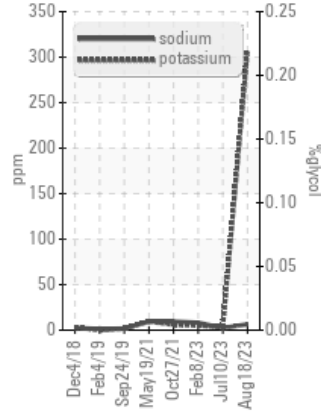
### ▲ Non-ferrous Metals



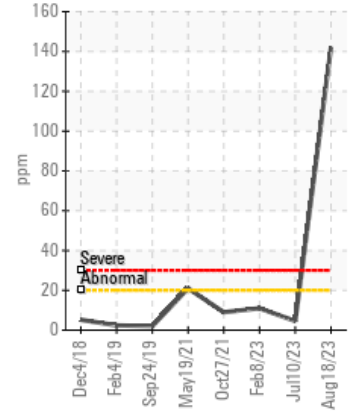
### ▲ Viscosity @ 100°C



### Glycol Contamination



### Aluminum (ppm)



## RECOMMENDATION

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

## PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	NORMAL	NORMAL
Copper	ppm	ASTM D5185m	>125	▲ 152	2	4
Tin	ppm	ASTM D5185m	>4	▲ 6	<1	<1
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 9.5	13.1	13.3

Customer Id: FREORL  
Sample No.: WC0787772  
Lab Number: 05937734  
Test Package: FLEET



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To discuss the diagnosis or test data:  
Don Baldrige +1  
[don.b505@comcast.net](mailto:don.b505@comcast.net)

To change component or sample information:  
Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS

### 10 Jul 2023 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report



### 08 Feb 2023 Diag: Jonathan Hester

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report



### 27 Oct 2021 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

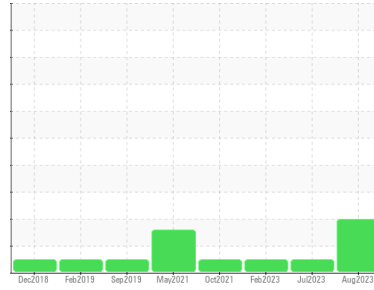
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Machine Id  
**FSP134332 (S/N FT9432)**  
 Component  
**Diesel Engine**  
 Fluid  
**EXXON 15W40 (32 QTS)**

## DIAGNOSIS

### ▲ Recommendation

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

### ▲ Wear

Bearing wear is indicated.

### Contamination

Fuel content negligible. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components.

### ▲ 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		<b>WC0787772</b>	WC0787790	WC0717921
Sample Date	Client Info		<b>18 Aug 2023</b>	10 Jul 2023	08 Feb 2023
Machine Age	mls	Client Info	<b>0</b>	311537	30103
Oil Age	mls	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	Changed	Changed
Sample Status			<b>ABNORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >130	<b>35</b>	27	70
Chromium	ppm	ASTM D5185m >10	<b>2</b>	<1	3
Nickel	ppm	ASTM D5185m >4	<b>&lt;1</b>	<1	1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185m >20	<b>142</b>	5	11
Lead	ppm	ASTM D5185m >20	<b>2</b>	2	9
Copper	ppm	ASTM D5185m >125	<b>▲ 152</b>	2	4
Tin	ppm	ASTM D5185m >4	<b>▲ 6</b>	<1	<1
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>40</b>	2	10
Barium	ppm	ASTM D5185m	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185m	<b>41</b>	75	68
Manganese	ppm	ASTM D5185m	<b>3</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>544</b>	1043	831
Calcium	ppm	ASTM D5185m	<b>1831</b>	1302	1259
Phosphorus	ppm	ASTM D5185m	<b>740</b>	1151	905
Zinc	ppm	ASTM D5185m	<b>942</b>	1410	1155
Sulfur	ppm	ASTM D5185m	<b>2720</b>	3598	3278

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>7</b>	6	11
Sodium	ppm	ASTM D5185m	<b>6</b>	2	8
Potassium	ppm	ASTM D5185m >20	<b>307</b>	3	5
Fuel	%	ASTM D3524 >3.0	<b>0.2</b>	<1.0	<1.0

## INFRA-RED

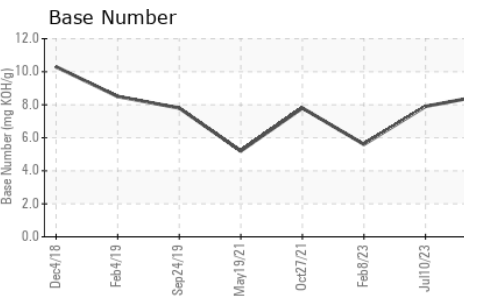
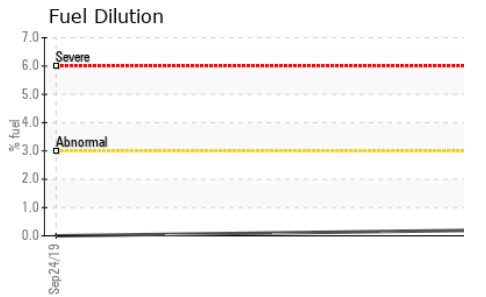
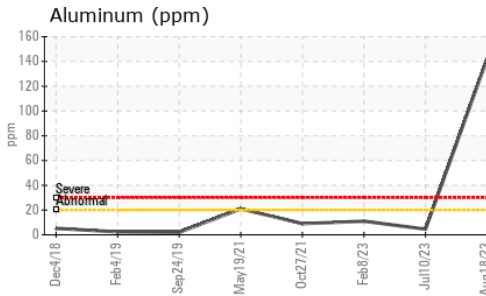
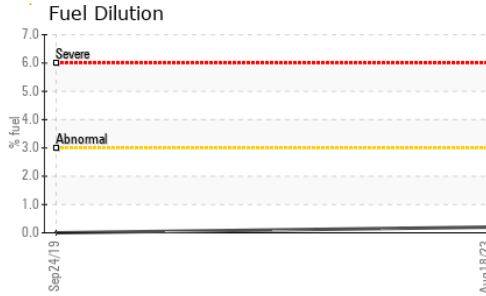
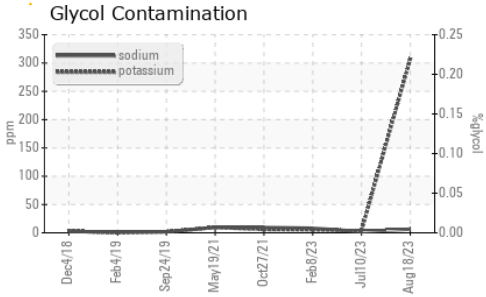
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	<b>0.2</b>	0.6	1.5
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.3</b>	11.4	15.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>22.4</b>	23.1	31.9

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>20.7</b>	20.4	31.5
Base Number (BN)	mg KOH/g	ASTM D2896	<b>8.6</b>	7.9	5.6



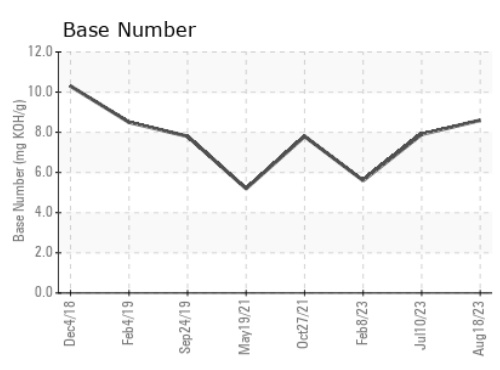
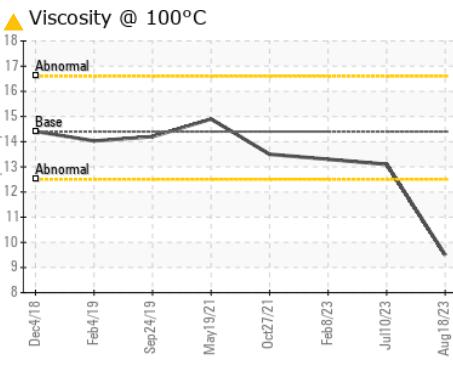
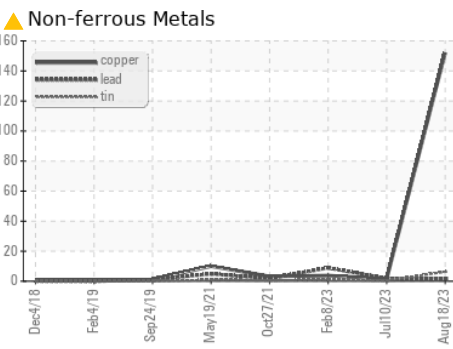
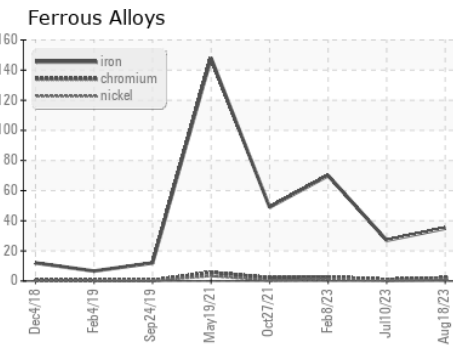
# OIL ANALYSIS REPORT



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	14.4 ▲ 9.5	13.1	13.3

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0787772 **Received** : 29 Aug 2023  
**Lab Number** : 05937734 **Diagnosed** : 30 Aug 2023  
**Unique Number** : 10623005 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

**FRESHPOINT**  
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 evans\_craig@sbcglobal.net  
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Certificate L2367  
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 \* - 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)