



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Area  
[28]  
Machine Id

Component  
**FREIGHTLINER Trash truck (S/N 1FVHCYCY2GHHE4532)**

Fluid  
**Primary Diesel Engine**

**Starfire 10w30 HDEO CK-4/SN (21 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor. ( Customer Sample  
Comment: Oil used was Starfire 10w30 HDEO CK-4/SN )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>ML0000592</b>	---	---
Sample Date		Client Info		<b>25 Jun 2024</b>	---	---
Machine Age	hrs	Client Info		<b>9527</b>	---	---
Oil Age	hrs	Client Info		<b>287</b>	---	---
Filter Age	hrs	Client Info		<b>287</b>	---	---
Oil Changed		Client Info		<b>Changed</b>	---	---
Filter Changed		Client Info		<b>Changed</b>	---	---
Sample Status				<b>NORMAL</b>	---	---

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>10</b>	---	---
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	---	---
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185m	>2	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m	>15	<b>6</b>	---	---
Lead	ppm	ASTM D5185m	>25	<b>&lt;1</b>	---	---
Copper	ppm	ASTM D5185m	>100	<b>1</b>	---	---
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	---	---
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	---	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---

## CONTAMINATION

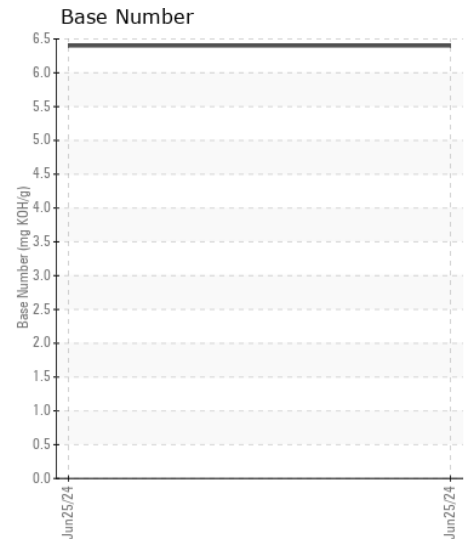
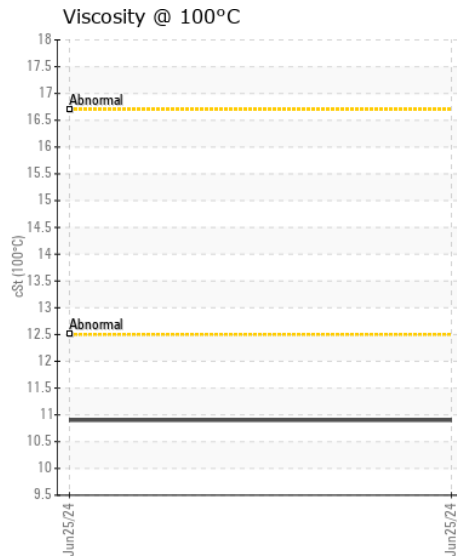
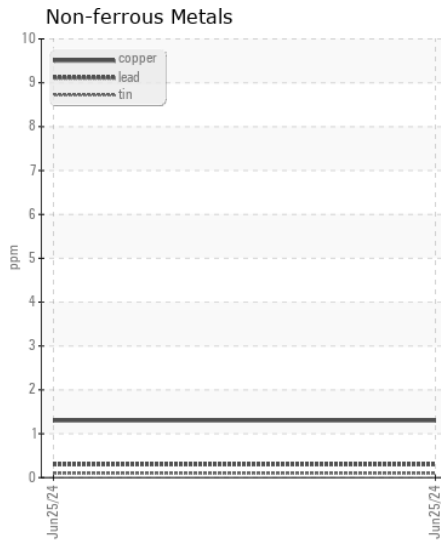
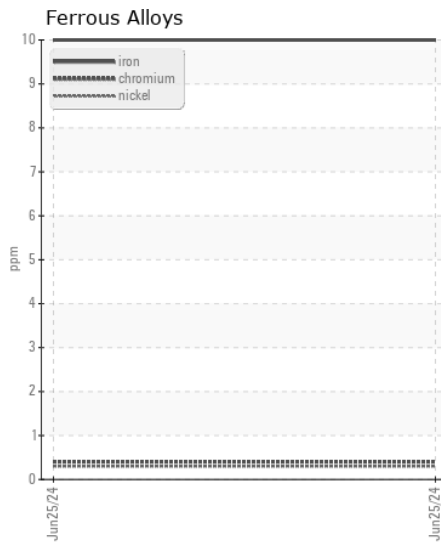
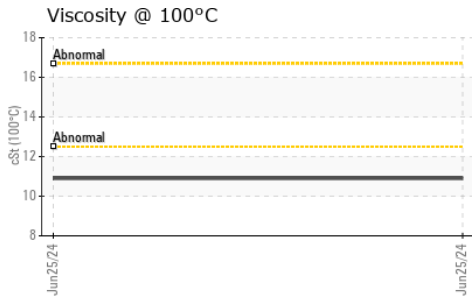
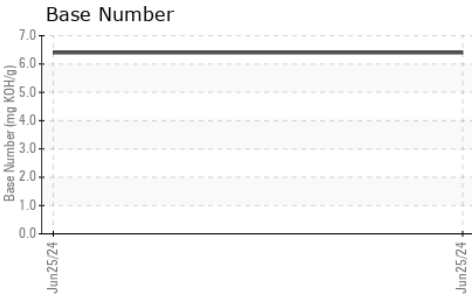
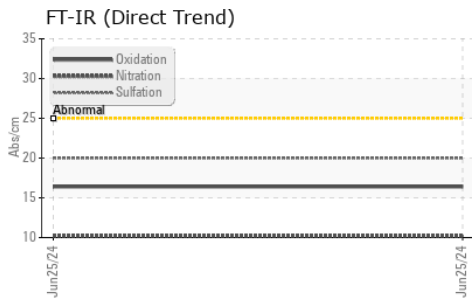
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>5</b>	---	---
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	---	---
Fuel	%	ASTM D3524	>3.0	<b>&lt;1.0</b>	---	---
Water		WC Method	>0.2	<b>NEG</b>	---	---
Glycol		WC Method		<b>NEG</b>	---	---
Soot %	%	*ASTM D7844	>6	<b>0.3</b>	---	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.2</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.0</b>	---	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	---	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	---	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	---	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	---	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	---	---

## 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.

Sodium	ppm	ASTM D5185m		<b>7</b>	---	---
Boron	ppm	ASTM D5185m		<b>39</b>	---	---
Barium	ppm	ASTM D5185m		<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m		<b>92</b>	---	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185m		<b>62</b>	---	---
Calcium	ppm	ASTM D5185m		<b>2257</b>	---	---
Phosphorus	ppm	ASTM D5185m		<b>1105</b>	---	---
Zinc	ppm	ASTM D5185m		<b>1300</b>	---	---
Sulfur	ppm	ASTM D5185m		<b>4248</b>	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.4</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		<b>6.4</b>	---	---
Visc @ 100°C	cSt	ASTM D445		<b>10.9</b>	---	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ML0000592      **Received** : 27 Jun 2024  
**Lab Number** : **06222162**      **Tested** : 28 Jun 2024  
**Unique Number** : 11100359      **Diagnosed** : 29 Jun 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: FuelDilution, TBN )

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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