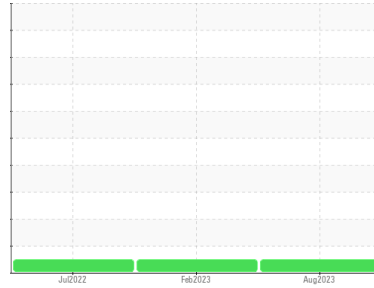




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**FREIGHTLINER M2 442101 - Tack truck (S/N 6896)**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA 10W30 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

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. 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>SBP0004639</b>	SBP0001293	SBP0001441
Sample Date	Client Info			<b>23 Aug 2023</b>	23 Feb 2023	08 Jul 2022
Machine Age	hrs	Client Info		<b>1858</b>	1334	827
Oil Age	hrs	Client Info		<b>524</b>	507	553
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	<b>38</b>	46	73
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>30	<b>6</b>	3	5
Lead	ppm	ASTM D5185m	>30	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>150	<b>9</b>	25	159
Tin	ppm	ASTM D5185m	>5	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>4</b>	15	55
Barium	ppm	ASTM D5185m		<b>0</b>	0	1
Molybdenum	ppm	ASTM D5185m		<b>51</b>	43	39
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	2
Magnesium	ppm	ASTM D5185m		<b>793</b>	684	575
Calcium	ppm	ASTM D5185m		<b>1091</b>	1242	1674
Phosphorus	ppm	ASTM D5185m		<b>884</b>	707	675
Zinc	ppm	ASTM D5185m		<b>1128</b>	978	888
Sulfur	ppm	ASTM D5185m		<b>3100</b>	2901	2893

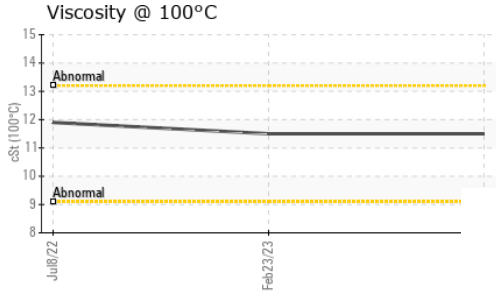
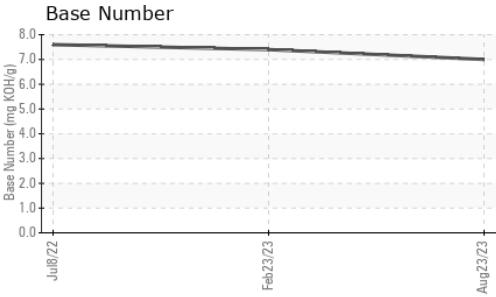
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	<b>7</b>	8	15
Sodium	ppm	ASTM D5185m		<b>3</b>	2	3
Potassium	ppm	ASTM D5185m	>20	<b>19</b>	7	10

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.9</b>	1	1.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.8</b>	10.9	12.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.3</b>	22.5	24.8

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.6</b>	18.0	22.6
Base Number (BN)	mg KOH/g	ASTM D2896		<b>7.0</b>	7.4	7.6



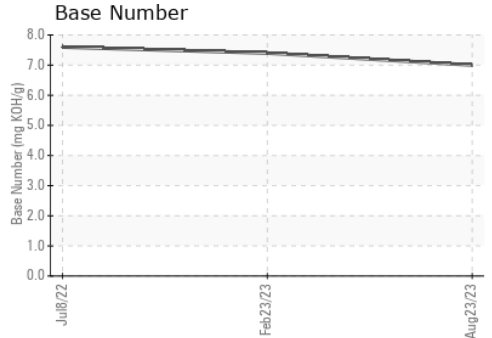
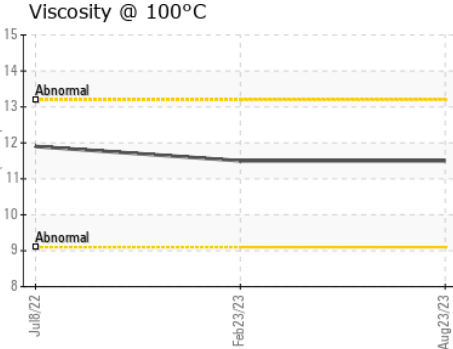
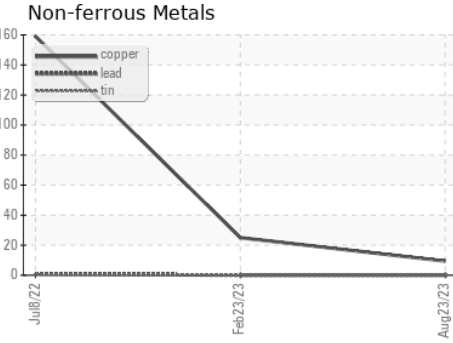
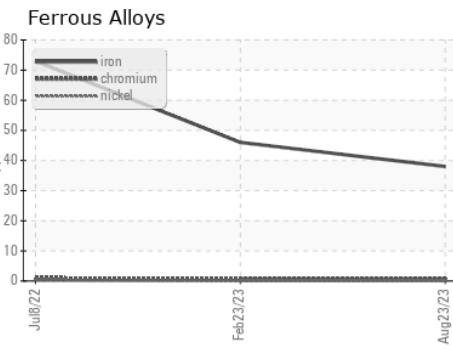
# OIL ANALYSIS REPORT



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	<b>11.5</b>	11.5	11.9

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : SBP0004639 **Received** : 28 Aug 2023  
**Lab Number** : **05935942** **Diagnosed** : 28 Aug 2023  
**Unique Number** : 10621213 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**Constructors Inc. - 603659**  
 1815 Y Street  
 Lincoln, NE  
 US 68508  
 Contact: Jack Linhart  
 jackl@constructorslincoln.com  
 T: (402)434-2157  
 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)