



# OIL ANALYSIS REPORT

WEAR	<b>ABNORMAL</b>
CONTAMINATION	<b>SEVERE</b>
FLUID CONDITION	<b>ABNORMAL</b>

Machine Id  
**FREIGHTLINER TRACTOR 720204**

Component  
**Diesel Engine**

Fluid  
**DURALENE Dura-Max 15W40 (--- GAL)**

## RECOMMENDATION

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.  
NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>DC0033005</b>	DC0021537	DC0013281
Sample Date		Client Info		<b>30 Jan 2024</b>	23 May 2023	20 May 2022
Machine Age	mls	Client Info		<b>113510</b>	85250	31394
Oil Age	mls	Client Info		<b>26000</b>	25000	30000
Filter Age	mls	Client Info		<b>26000</b>	25000	30000
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>SEVERE</b>	ABNORMAL	ABNORMAL

## WEAR

Cylinder, crank, or cam shaft wear is indicated.

Iron	ppm	ASTM D5185m	>80	<b>▲ 93</b>	55	79
Chromium	ppm	ASTM D5185m	>5	<b>5</b>	3	4
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>30	<b>21</b>	2	4
Lead	ppm	ASTM D5185m	>30	<b>15</b>	13	17
Copper	ppm	ASTM D5185m	>150	<b>2</b>	3	4
Tin	ppm	ASTM D5185m	>5	<b>2</b>	2	2
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

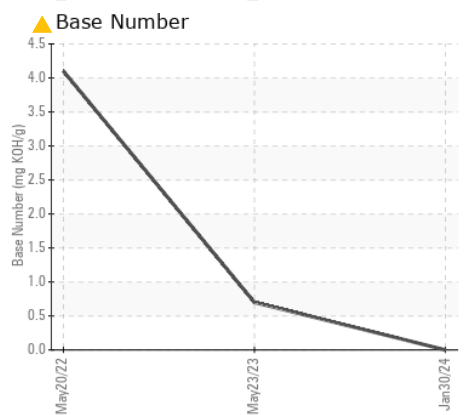
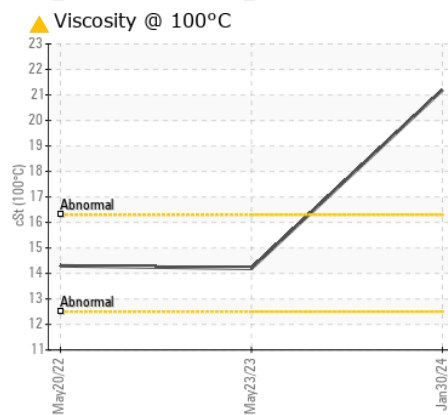
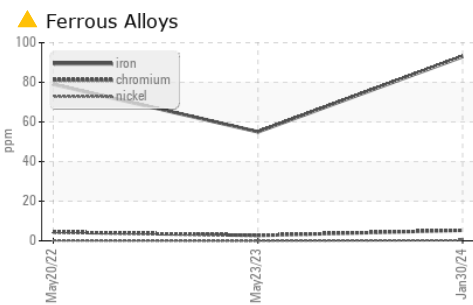
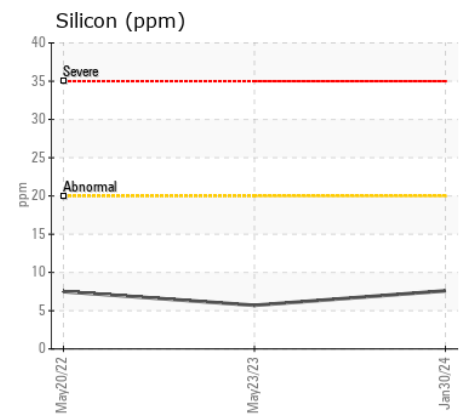
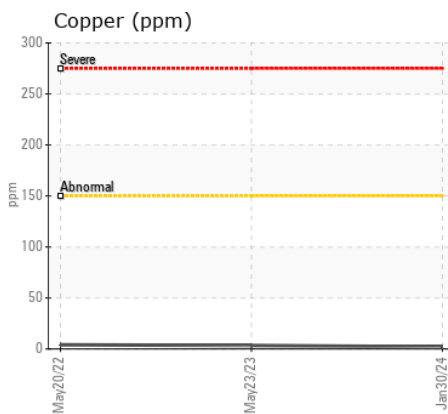
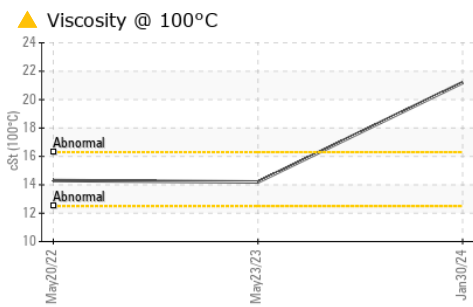
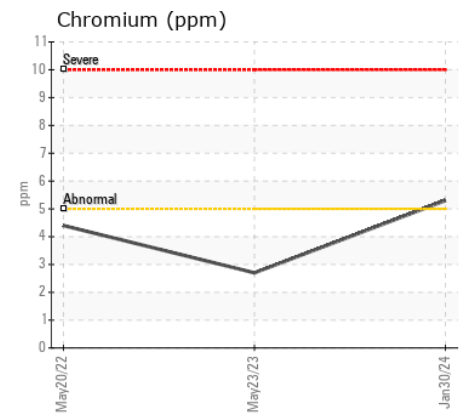
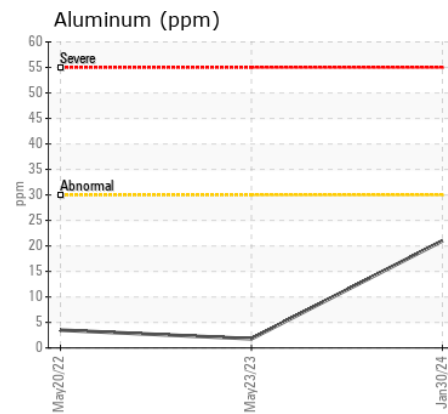
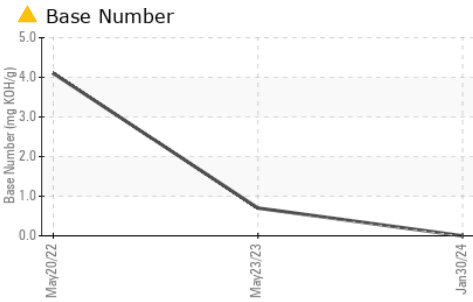
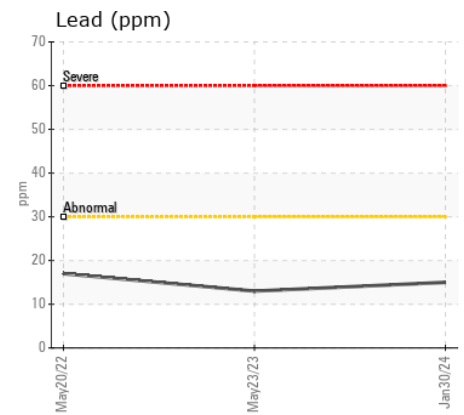
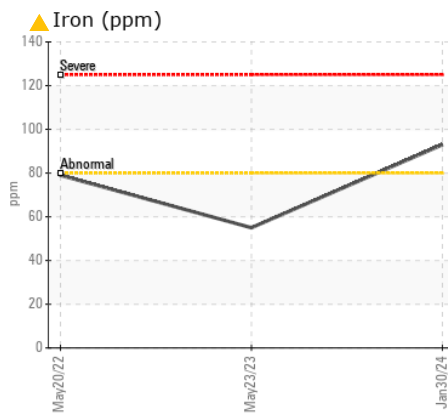
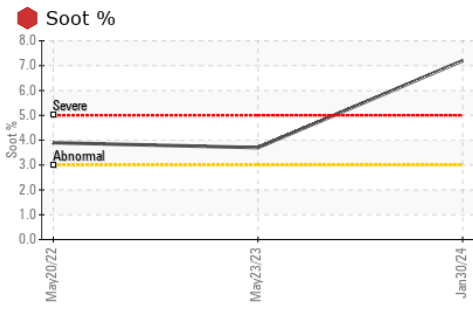
There is an abnormal amount of solids and carbon present in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>8</b>	6	8
Potassium	ppm	ASTM D5185m	>20	<b>53</b>	3	4
Fuel	%	ASTM D3524	>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
Soot %	%	*ASTM D7844	>3	<b>● 7.2</b>	▲ 3.7	▲ 3.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>18.9</b>	10.2	11.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>38.8</b>	27.5	28.8
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

The oil viscosity is higher than normal. The BN level is low.

Sodium	ppm	ASTM D5185m		<b>4</b>	3	1
Boron	ppm	ASTM D5185m		<b>0</b>	<1	15
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>2</b>	2	14
Manganese	ppm	ASTM D5185m		<b>2</b>	<1	1
Magnesium	ppm	ASTM D5185m		<b>33</b>	41	106
Calcium	ppm	ASTM D5185m		<b>2397</b>	2402	2332
Phosphorus	ppm	ASTM D5185m		<b>890</b>	858	895
Zinc	ppm	ASTM D5185m		<b>1084</b>	1061	1141
Sulfur	ppm	ASTM D5185m		<b>3448</b>	4268	3275
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>32.5</b>	12.3	14.0
Base Number (BN)	mg KOH/g	ASTM D2896		<b>▲ 0.0</b>	▲ 0.7	4.1
Visc @ 100°C	cSt	ASTM D445		<b>▲ 21.2</b>	14.2	14.3



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : DC0033005 **Received** : 26 Feb 2024  
**Lab Number** : 06100670 **Tested** : 27 Feb 2024  
**Unique Number** : 10898900 **Diagnosed** : 27 Feb 2024 - Jonathan Hester  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, TBN )

**CONSERVIT INC.**  
 PO BOX 1517  
 HAGERSTOWN, MD  
 US 21740  
 Contact: DON LONG

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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