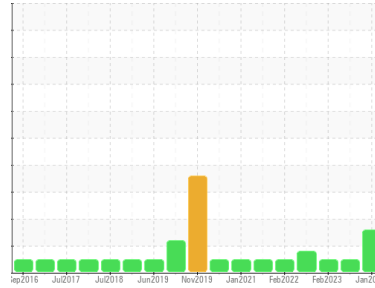




# OIL ANALYSIS REPORT

Sample Rating Trend



**WATER**



Area  
**3000 Series**  
 Machine Id  
**Freightliner 3802T**

Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (26 LTR)**

## DIAGNOSIS

### ▲ Recommendation

We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### ▲ Contamination

There is a light concentration of water present in the oil. Test for glycol is negative.

### Fluid Condition

The oil is no longer serviceable due to the presence of contaminants.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0886653</b>	WC0805724	WC0785977
Sample Date	Client Info		<b>20 Jan 2024</b>	30 Jul 2023	25 Feb 2023
Machine Age	mls	Client Info	<b>203065</b>	209554	198579
Oil Age	mls	Client Info	<b>9440</b>	10977	14017
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>ABNORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>75	<b>36</b>	52	71
Chromium	ppm	ASTM D5185(m)	>5	<b>2</b>	3	4
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>15	<b>6</b>	6	11
Lead	ppm	ASTM D5185(m)	>25	<b>&lt;1</b>	1	2
Copper	ppm	ASTM D5185(m)	>100	<b>3</b>	2	3
Tin	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	<1
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	0	<b>3</b>	3	2
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>58</b>	64	65
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	<b>785</b>	962	986
Calcium	ppm	ASTM D5185(m)	1070	<b>1177</b>	1031	1131
Phosphorus	ppm	ASTM D5185(m)	1150	<b>890</b>	986	1075
Zinc	ppm	ASTM D5185(m)	1270	<b>1081</b>	1142	1206
Sulfur	ppm	ASTM D5185(m)	2060	<b>2625</b>	2375	2465
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

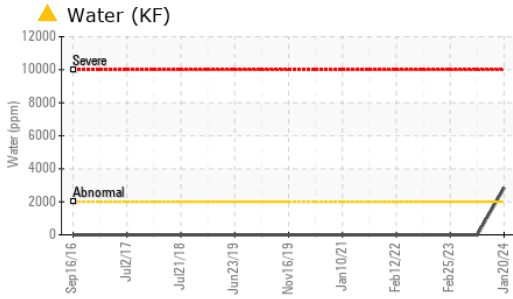
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	<b>10</b>	12	10
Sodium	ppm	ASTM D5185(m)		<b>2</b>	32	34
Potassium	ppm	ASTM D5185(m)	>20	<b>2</b>	38	32
Water	%	ASTM D6304*	>0.2	<b>▲ 0.285</b>	---	---
ppm Water	ppm	ASTM D6304*	>2000	<b>▲ 2858</b>	---	---
Glycol	%	ASTM D7922*		<b>0.0</b>	0.0	0.0

## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>6	<b>1.9</b>	1.1	0.6
Nitration	Abs/cm	ASTM D7624*	>20	<b>15.5</b>	12.3	7.7
Sulfation	Abs.1mm	ASTM D7415*	>30	<b>28.9</b>	26.3	20.8



# OIL ANALYSIS REPORT

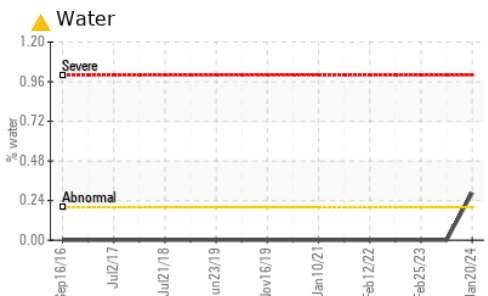
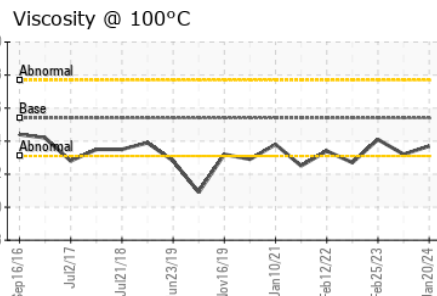
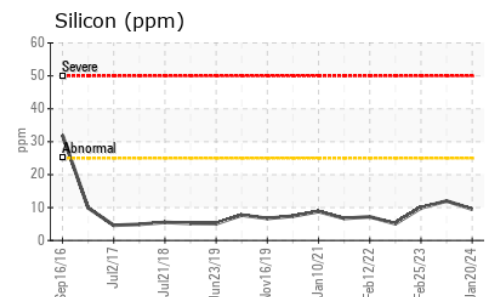
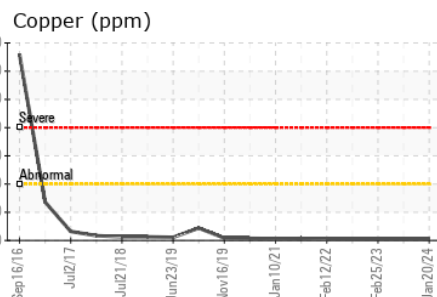
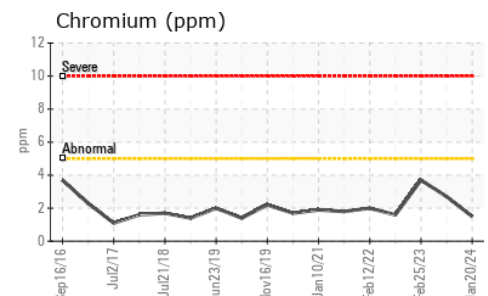
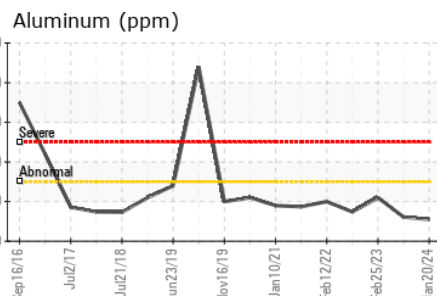
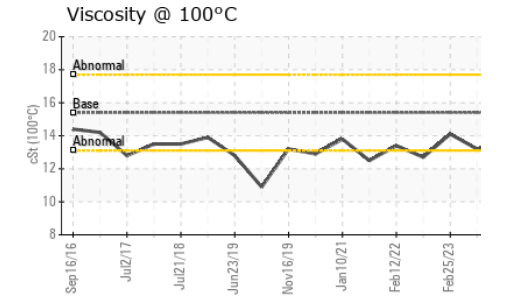
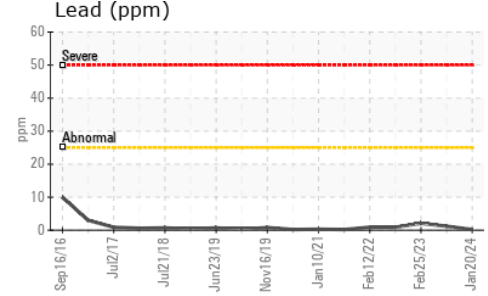
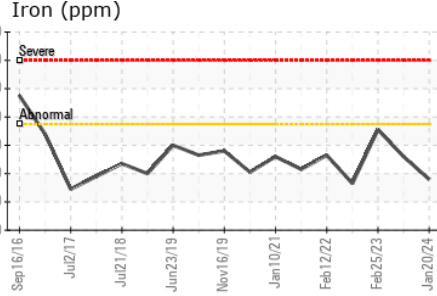
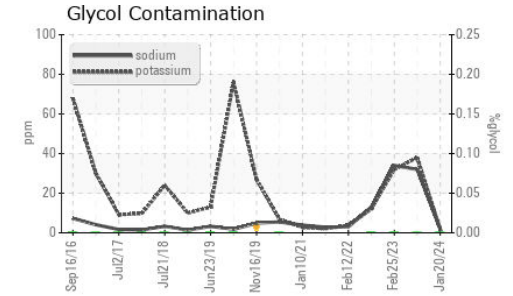


FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs./1mm ASTM D7414*	>25	<b>25.3</b>	23.0	13.1

VISUAL	method	limit/base	current	history1	history2
Emulsified Water	scalar Visual*	>0.2	<b>▲ .2%</b>	NEG	NEG
Free Water	scalar Visual*		<b>NEG</b>	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt ASTM D7279(m)	15.4	<b>13.7</b>	13.2	14.1

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **MANITOU LIN TRANSPORT (GARAGE)**  
**Sample No.** : WC0886653 **Received** : 23 Jan 2024 1335 SHAWSON DRIVE  
**Lab Number** : 02610534 **Diagnosed** : 24 Jan 2024 MISSISSAUGA, ON  
**Unique Number** : 5711620 **Diagnostician** : Kevin Marson CA L4W 1C4  
**Test Package** : MOB 1 ( Additional Tests: Glycol, KF ) Contact: Travis Spence

To discuss this sample report, contact Customer Service at 1-800-268-2131.

Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.

Validity of results and interpretation are based on the sample and information as supplied.

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