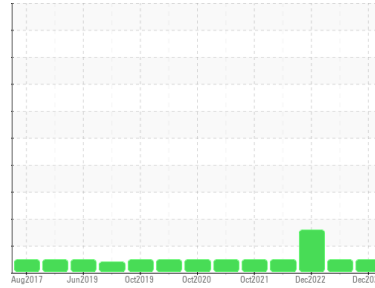




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**3000 Series**  
 Machine Id  
**Freightliner 3230**

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

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

The condition of the oil is acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0828267</b>	WC0797624	WC0759750
Sample Date	Client Info		<b>16 Dec 2023</b>	18 Jun 2023	11 Dec 2022
Machine Age	mls	Client Info	<b>255689</b>	235118	217521
Oil Age	mls	Client Info	<b>20541</b>	17597	15854
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	ABNORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<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

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>75	<b>63</b>	60	▲ 93
Chromium	ppm	ASTM D5185(m)	>5	<b>3</b>	3	▲ 5
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>15	<b>7</b>	6	6
Lead	ppm	ASTM D5185(m)	>25	<b>&lt;1</b>	<1	2
Copper	ppm	ASTM D5185(m)	>100	<b>4</b>	3	5
Tin	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	1
Antimony	ppm	ASTM D5185(m)		<b>0</b>	<1	<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>2</b>	3	4
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>64</b>	64	60
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	2
Magnesium	ppm	ASTM D5185(m)	1010	<b>1004</b>	1016	965
Calcium	ppm	ASTM D5185(m)	1070	<b>1127</b>	1090	1200
Phosphorus	ppm	ASTM D5185(m)	1150	<b>1024</b>	1066	1022
Zinc	ppm	ASTM D5185(m)	1270	<b>1238</b>	1213	1185
Sulfur	ppm	ASTM D5185(m)	2060	<b>2601</b>	2398	2353
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

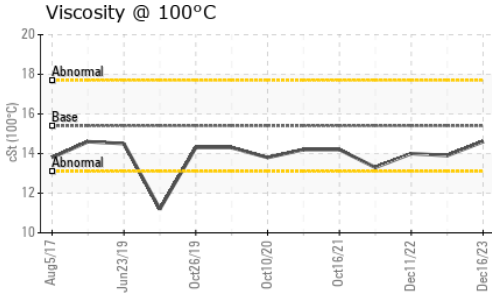
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	<b>7</b>	7	10
Sodium	ppm	ASTM D5185(m)		<b>5</b>	4	8
Potassium	ppm	ASTM D5185(m)	>20	<b>2</b>	2	2

## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>6	<b>1.4</b>	1.1	1.3
Nitration	Abs/cm	ASTM D7624*	>20	<b>15.6</b>	13.5	13.8
Sulfation	Abs./1mm	ASTM D7415*	>30	<b>29.9</b>	26.2	26.8



# OIL ANALYSIS REPORT



### FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs./1mm	ASTM D7414*	>25	<b>29.2</b>	24.7	25.3

### VISUAL

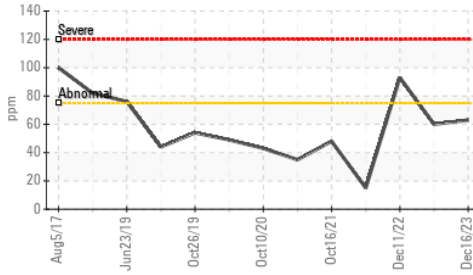
	method	limit/base	current	history1	history2	
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG
Free Water	scalar	Visual*		<b>NEG</b>	NEG	NEG

### FLUID PROPERTIES

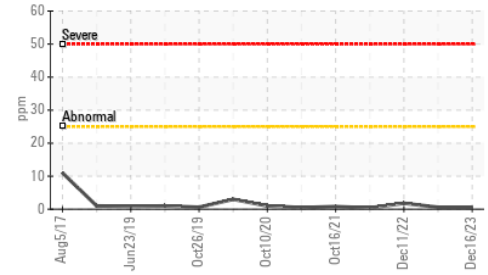
	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	<b>14.6</b>	13.9	14.0

### GRAPHS

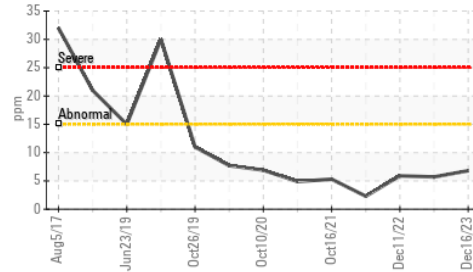
Iron (ppm)



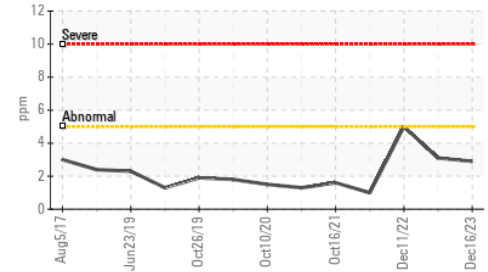
Lead (ppm)



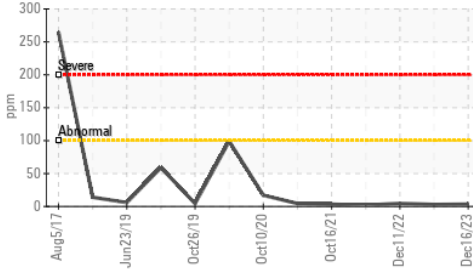
Aluminum (ppm)



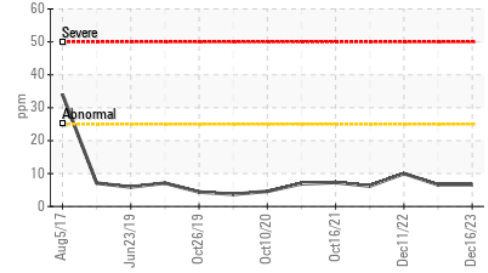
Chromium (ppm)



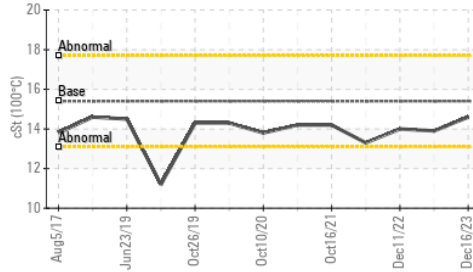
Copper (ppm)



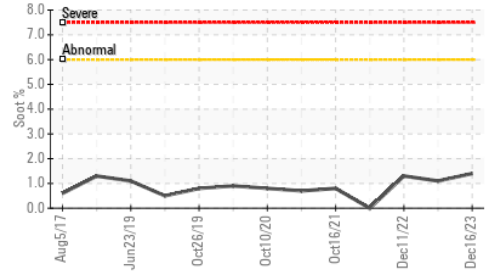
Silicon (ppm)



Viscosity @ 100°C



Soot %



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **MANITOULIN TRANSPORT (GARAGE)**  
**Sample No.** : WC0828267 **Received** : 22 Dec 2023 1335 SHAWSON DRIVE  
**Lab Number** : **02604892** **Diagnosed** : 22 Dec 2023 MISSISSAUGA, ON  
**Unique Number** : 5697977 **Diagnostician** : Kevin Marson CA L4W 1C4  
**Test Package** : MOB 1

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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